

EXHIBIT 5

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1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE EASTERN DISTRICT OF TEXAS
3 MARSHALL DIVISION

4 NETLIST, INC., (CAUSE NO. 2:21-CV-463-JRG
5)
6 Plaintiff, ()
7 vs. ()
8 SAMSUNG ELECTRONICS CO., LTD., ()
9 et al., () MARSHALL, TEXAS
10 (NOVEMBER 4, 2022
11 Defendants.) 9:00 A.M.

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13

14 MARKMAN HEARING

15 BEFORE THE HONORABLE ROY PAYNE
16 UNITED STATES MAGISTRATE JUDGE

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1 THE COURT: Good morning. Please be seated.

2 For the record, we're here for the claim construction
3 hearing in Netlist versus Samsung, which is Case No. 2:21-463
4 on our docket.

5 Would counsel state their appearances for the record?

6 MS. TRUELOVE: Good morning, Your Honor. Jennifer
7 Truelove for Plaintiff Netlist. With me today and who will be
8 presenting is Mr. Jason Sheasby, his colleague Annita Zhong,
9 and Michael Tezyan. We also have with us today some corporate
10 representatives, Jayson Sohi, Tobin Hobbs, and Jamie Zheng.
11 We are ready to proceed.

12 THE COURT: All right. Thank you, Ms. Truelove.

13 MS. SMITH: Good morning, Your Honor. Melissa Smith
14 on behalf of SamSUNG. I'm joined this morning by Mr. Mike
15 McKeon, Mr. Matt Colvin, Dr. Frank Albert, Mr. Jeff Burton.
16 And then, Your Honor, we also have two corporate
17 representatives from Samsung today--Young-Jun Choi, as well as
18 Won-Jin Lee. And Your Honor, we're ready to proceed.

19 THE COURT: All right. Thank you, Ms. Smith.

20 I will also point out for the record that earlier this
21 morning we distributed to counsel for both sides a set of
22 preliminary constructions of the disputed terms. The purpose
23 of issuing those preliminary constructions is not to deter
24 either side from taking whatever positions they think are
25 appropriate on these terms; rather, the preliminary

1 constructions are designed to let you know where the Court is
2 after the initial review of the briefing and the record so
3 that you can focus your arguments where you think the Court
4 may have most gone astray. I do reserve the right to amend
5 these preliminary constructions, and not uncommonly do alter
6 them based on the arguments received at this hearing, so I
7 hope that you will take them in that spirit.

8 I'd like to hear the arguments on a term-by-term basis,
9 but I'm happy to take them in whatever order counsel think is
10 most productive and to group them if counsel think that would
11 be efficient.

12 And I will note also that a variety of these preliminary
13 constructions have notes on them. Those notes are not part of
14 the official construction; they're designed to let you know
15 what will be reflected in the order that issues so that even
16 though it might say 'plain and ordinary meaning', there will
17 be further discussion in the order that issues designed to
18 govern the way the experts handle these terms. So I just
19 wanted to let you know that's what those parenthetical notes
20 are intended to communicate.

21 Having said that, I'll turn it over first to counsel for
22 Plaintiff.

23 Good morning, Mr. Sheasby.

24 MR. SHEASBY: Good morning, Your Honor. May it
25 please the Court.

1 On term A, we will stand on the papers because the Court
2 has preliminarily adopted our construction, and perhaps
3 Samsung would appreciate the opportunity to argue on that one.

4 THE COURT: All right.

5 MR. McKEON: Good morning. Mike McKeon for Samsung.
6 Always a pleasure to appear before you.

7 So I do want to make just a few points on the first term,
8 the 'dual buck converter' term. And one thing I want to
9 emphasize, and maybe we didn't do as good a job in our brief
10 as we should have in this, but this term 'dual buck converter'
11 that appears in dependent claims, it shows here on slide 7 a
12 depiction of what that physically looks like in the patent and
13 it's depicted in figure 16.

14 This term is not a term of art--'dual buck converter'.
15 'Buck converter' is. That's why no one's disputing that term.
16 But 'dual buck converter' doesn't have a common, ordinary,
17 understood meaning, and that's why, you know, we think it's
18 appropriate in this case to look to the specification to get
19 guidance on that. And when you do that, what you see here is
20 in figure 16 and the corresponding description at column 29 of
21 the patent, starting at line 46, which really defines and
22 gives meaning to what this term, which has no understood
23 meaning in the art, what it means in the context of the
24 patent. And what we see here is that when we talk about the
25 dual buck converter, we have these two voltages coming out.

1 No one, of course, disputes that. It's two voltages coming
2 out. But one voltage that comes out is different, distinct
3 from the other voltage comes out.

4 And the explanation here in the patent is -- again, at
5 column 29, is that you have the 2.5 voltage coming out, and in
6 the context of the embodiment, it's going to a particular
7 device in the whole system, an isolation device; whereas, the
8 second voltage is a reduced voltage, and that's going to the
9 -- a separate and distinct device--FPGA. And so we have these
10 two voltages coming out, but the voltages are different.

11 And, in fact, if we go to slide 9 here in our
12 presentation, what we see here if you look at all the buck
13 converters, they all actually have different values at the
14 output. And why is that? Because the patent describes in
15 quite detail that we want to drive different types of
16 components in the system, and these different components are
17 going to have different voltage requirements. And the logic
18 here, Your Honor, is, Well, if I had two components that only
19 needed 1.8 volts, well, then I just need one output of a buck
20 converter that I can send to both of those components. So I
21 don't need -- if I have a buck converter with a dual output,
22 it would be superfluous, completely redundant, unnecessary to
23 have them be the same voltage.

24 And we see the descriptions in the specification here at
25 column 29, you know, quoting here at line 33, you know, "an

1 appropriate amount of powering for the various components."
2 And the way the system is defined in the patent, and
3 particularly the buck converters, in every instance -- there's
4 not a single instance where we have a different value or a
5 same value coming out not only within the dual buck converter,
6 but actually across the buck converters, because again, that
7 would be superfluous; you wouldn't need to do that.

8 One final point, Your Honor, is there is a claim in the
9 patent where we talk about a first and third buck converters
10 are configured to operate as a dual buck converter, and the
11 point here is that when -- if I had these separate buck
12 converters that had these separate values in the independent
13 claim and I bring them together in the dependent claim, then
14 they're going to have -- retain their separate values and --
15 when they're combined as a dual buck converter. And again,
16 it -- you know, it would make no sense as a matter of logic or
17 as a matter of the technology as described in this patent to
18 have them be the same value because you would just have one
19 output then that would go to the different components.

20 THE COURT: You know, Mr. McKeon, that sounds like a
21 good argument to me for the system having the capability to
22 have a different value out of each buck converter, but where
23 do you derive a requirement that it can only be different
24 values?

25 MR. McKEON: I would say, Your Honor, when the

1 disclosure is limiting in that way, when THE -- to describe
2 the embodiment -- and again, this is not a term of art. When
3 they describe 'dual buck converter' in the patent, it's only
4 described this way. And I do concede, Your Honor, looking at
5 the claim language itself, you know, if you want to take the
6 most broadest view of the claim language itself, your proposed
7 construction in the preliminary is, you know, within that
8 logic. But if you look at the specification and one of
9 ordinary skill in the art is thinking, What about the dual
10 buck converter, I'm going to have to go to the specification,
11 and when you have it consistently and uniquely defined in this
12 way, then, you know, we think that's limiting, and that's
13 really the source of our point here, our argument here.

14 THE COURT: You know, I would quibble with your use
15 of the word 'defined'. I don't see it defined in the
16 specification at all.

17 MR. McKEON: What I would say, Your Honor, we rely
18 on cases like *Bell Atlantic* where you have these -- you know,
19 defined by implication. You're absolutely right, Your Honor;
20 it's not defined in the sense that 'dual buck converter' is
21 herein defined as X, Y, and Z, and that's definitely the case,
22 Your Honor. But when you have a description of a component
23 that has no ordinary meaning in the art and it's the only
24 description of it, then you have to define it by implication,
25 and we think that's really what's going on here in the context

1 of this term.

2 THE COURT: And let me back up and question a
3 premise you have on the screen right now, which is that the
4 first buck converter and the third buck converter must involve
5 different voltage amplitudes. Is that just an implicit
6 characteristic as you see it, or is there something in the
7 specification that you think requires that?

8 MR. McKEON: Again, Your Honor, going back to the --
9 sort of the main foundation of our argument, which is the only
10 disclosure is that they have -- all have separate values
11 coming out. And again, it would be superfluous if I was to
12 have -- if these were all the same values, to be superfluous
13 you would just need one output and you could drive as many
14 different components in the system as you wanted to with that
15 one value. The point is that these difference components that
16 are in the system require different values.

17 And that is why we have these -- you know, you have these
18 -- this one voltage coming into all these buck converters, you
19 have one voltage coming in at 1110 or, alternatively, 1112.
20 That's value coming in. One value is coming in. And these
21 different buck converters are going to downscale that value,
22 it's actually five volts coming in, and they're each going to
23 down-tick the value to the appropriate level and they're all
24 going to have different values. And if you had a system where
25 they could be the same, then you wouldn't need these different

1 buck converters.

2 And we just think with the term 'dual buck converter',
3 particularly because it's not defined in the art, you know,
4 you're going to have to be stuck with you what you disclosed
5 to the public in your patent. And that's the main point and
6 premise of the argument, Your Honor.

7 THE COURT: All right. Thank you, Mr. McKeon.

8 MS. SMITH: Your Honor, may I pass up some slides,
9 please?

10 THE COURT: Sure.

11 MS. SMITH: Thank you.

12 THE COURT: Thank you, Ms. Smith.

13 Go ahead Mr. Sheasby.

14 MR. SHEASBY: Thank you, Your Honor.

15 I think the basic premise of the argument is that two
16 separate components cannot demand the same value on the
17 module, and that is absolutely inconsistent with the patent.
18 This is the '918 Patent, 29, 18 through 64, and this is an
19 object lesson in why there may be lots of reasons to have
20 separate circuits delivering the same voltage.

21 So in this example the DRAM, flash, and controller all
22 require 1.8 volts, and there is an option of them being
23 supplied over a single line, 1102. But then if you go down to
24 the bottom of that same passage, it makes clear that an
25 independent voltage can be used to supply the DRAM and flash.

1 And, of course, those DRAM and flashes still require the same
2 1.8 volts; they're just being supplied independently. And so
3 the basic premise that each of the wires has to, in effect,
4 supply a different voltage is not in the specification itself.

5 The dual buck converter, there is no evidence that that's
6 a specialized term of art or a term that was coined by the
7 patent owner in this case. The purpose of the figure 16
8 embodiment is to note that you can use lots of different types
9 of power management tools. You can use buck converters, you
10 can use dual buck converters, you can use buck and burst
11 converters, but there's no requirement or -- there's no
12 requirement or standard that each of those has to deliver a
13 different voltage. For example, we know in the preferred
14 embodiment that the voltage 1122 is outputting 1.8 volts, but,
15 in the alternative, there can be a separate for DRAMs, flash,
16 and FPGA, but we know in the alternative embodiment there
17 could be an independent voltage.

18 Thank you, Your Honor.

19 THE COURT: And Mr. Sheasby, is there a reason that
20 you can articulate why a dual buck converter would have the
21 same voltage coming out on both lines?

22 MR. SHEASBY: There is, Your Honor, and I can
23 explain it. There is two reasons.

24 If you go to slide 66.

25 In particular in FPGA--and you can look at this from the

1 specification itself--the FPGA operates not just at one
2 voltage; it can operate at multiple voltages at different
3 particular times. And that's talked about in the
4 specification. If you ran the core of the FPGA, you would
5 operate at one voltage; if you ran other elements of the FPGA,
6 you'd operate at another voltage. And so, for example, this
7 is talking about FPGAs that operate across voltage ranges that
8 start from 1 and go up to 2.5 volts.

9 And so the reason for the dual buck converter having the
10 capability of doing different voltages, but not requirement,
11 is that it's not an assumption that the voltage demand for a
12 given component will stay the same throughout the operating
13 cycle. And the specification in particular talks about the
14 FPGA operating at different voltages in different events.

15 THE COURT: All right.

16 MR. SHEASBY: Thank you, Your Honor.

17 THE COURT: Thank you, Mr. Sheasby.

18 MR. McKEON: Your Honor, I think you got the
19 argument, so with that, we rest.

20 THE COURT: All right, then. Thank you, Mr. McKeon.

21 And we can take the next term.

22 MR. SHEASBY: Your Honor, I think for B, C, and D we
23 will stand on our briefing.

24 THE COURT: All right.

25 MR. McKEON: Ms. Andrews, can we have the slides?

1 All right. 'Pre-regulated input voltage', Your Honor.
2 So, I mean, the dispute here, of course, as Your Honor knows
3 reviewing the briefs is, you know, whether this regulated
4 voltage needs to be generated on the memory module itself.
5 That's really the crux of the dispute here. And, you know,
6 I'll note that their proposal, of course, modulated input
7 voltage. And the thing about their proposal, Your Honor, it
8 takes out the word 'pre-regulated'. 'Pre-regulated' must mean
9 something. You know, 'pre-regulated input voltage'. And if
10 you just say 'modulated input voltage', what does that -- that
11 really changes the character of what 'pre-regulated input
12 voltage' is.

13 And we think from the context of the disclosure in the
14 patent, and also the claims, is that the pre-regulated
15 voltage, it comes from the input voltage, the source of it,
16 but the key is that it's actually done on the module. And, of
17 course, the pre-regulated voltages serve to be an input into
18 the buck converters we just talked about.

19 And this is where the language appears in the claim. And
20 just take a second, Your Honor, if I can, to walk through --
21 sort of piece together how the claim operates in these
22 different elements. Of course, we have that printed circuit
23 board. And we had this input voltage. That comes in and that
24 is going to this power element. And the power element is what
25 is generating on the actual module, on the circuit board, it's

1 generating the pre-regulated input voltage which, in turn,
2 goes to the buck converters and, of course, is an output and
3 that goes to another component. So the patent is very clear
4 in its description how these all relate, and we -- you know,
5 we think the claim is very consistent with that.

6 And the disclosure here, Your Honor, is also very clear
7 on this. And what we've highlighted here in this red, these
8 are the two power elements, and both take that input in and
9 what they're doing is they're cranking that up to a higher
10 level and they're pre-regulating the voltage. And what are
11 they pre-regulating the voltage for? Well, they're
12 pre-regulating it to be inputs into the buck converters we
13 talked about. And then the buck converters, in turn, will
14 down -- you know, down shift the voltage. But the
15 pre-regulated voltage is something that's generated on the
16 power module because it's tied directly to the buck
17 converters. They're the inputs to the buck converters. And,
18 of course, we see that in the disclosure how they're all tied
19 together.

20 Now, there's an argument made by our capable counsel
21 here on the other side about figure 12, and I just want to
22 quickly respond to that. Now, figure 12 is a different
23 configuration, and then what I have here on the slide is
24 figure 12 and this power source 1080. And the argument that
25 was made is, Well, what if you take the figure 12 power source

1 and you could bring it into figure 16. And there is
2 disclosure in the patent that says that, but it has nothing to
3 do with the pre-regulation. I mean, the figure 12 doesn't
4 even talk about pre-regulated voltage.

5 And the reason why counsel points out figure 12 is
6 because there is actually a section in connection with
7 describing figure 12 that says 1080, this power source, can be
8 off the module. It says that for figure 12. And they cite to
9 that and say, Okay, Your Honor, therefore, you shouldn't have
10 that requirement. But Your Honor, I think the point there is
11 that actually the fact that it says it for figure 12 and does
12 not say it for figure 16 I think is quite telling. I mean,
13 they -- when they want to have clarity around where these
14 different components could be and where these signals are
15 generated, they gave you the option of figure 12, but they
16 specifically did not do that in figure 16.

17 And figure 16, of course, is very important because
18 that's where the pre-regulated voltage term is applicable.
19 The pre-regulated voltage is the green here on the right, and
20 that's coming from the power sources, and it's generated on
21 the board, and it's tied directly to the buck converters. And
22 the way they've construed it, Your Honor, and I fear the way
23 that your preliminary -- the scope of your preliminary is
24 that, you know, this pre-regulated voltage can be generated,
25 you know, systems away, and as long as it ends up into the

1 buck converters that's all that matters. And we just think,
2 Your Honor, that's a step too far given the context of this
3 term as it's used in the patent, and also, you know, the
4 pre-regulation. That's a term in the claim. And I fear, Your
5 Honor, that your construction just removes that. And what
6 meaning does that have in the context of this claim and this
7 patent--pre-regulated voltage. And we feel, Your Honor, that,
8 you know, it's got to be tied directly to those buck
9 converters and it's got to be generated on the module.

10 And with that, Your Honor, I'll save --

11 THE COURT: I guess my initial read on this is that
12 while pre-regulated voltage is a limitation of the claim that
13 has to be met, the claim as it's written is agnostic as to
14 where that occurs. And I understand that there is an
15 embodiment which is displayed in figure 16 that would support
16 your understanding of it, but my difficulty is in finding that
17 that embodiment has to be read into the claim.

18 MR. McKEON: And Your Honor, that's obviously a
19 great question, and what I would say to that is, you know,
20 again, I would just -- I would hang my hooks onto that
21 'pre-regulated' term. But if you look at the way the claims
22 set up, you've got this input voltage coming in and it's
23 coming in from these edge connections, and the edge
24 connections are on the module. So I have the input voltage
25 coming from the edge connections and then I'm generating these

1 pre-regulated input voltages. They're pre-regulated input
2 voltages, and these input voltages, where do they come from?
3 They don't just fall from the sky. They came in through the
4 edge connection. So the input voltages are on the board. And
5 when they make the pre-regulated input voltages, I'm doing
6 that on the board because they're coming from what came in
7 through the edge connection.

8 So I think the claim itself really gives you the
9 structure of how these voltages are related, and it's tied
10 directly back to figure 16. So they're coming in from the
11 edge. That's a structural limitation there. The input
12 voltages are coming into the edge, and then they go into the
13 power circuit, and they are pre-regulated, and that's all on
14 the board. And, you know, the pre-regulated input voltages,
15 again, they are not just falling from the sky; they're coming
16 -- they're generated on the board, and the source of them, you
17 know, is what's coming into those edge connections. That's
18 the source of that power. And so the claim itself is what
19 really puts that structure together there, and I think, you
20 know, when you look at the patent it really brings it home.

21 THE COURT: All right.

22 MR. McKEON: Thank you, Your Honor.

23 THE COURT: Thank you, Mr. McKeon.

24 MS. ZHONG: Can we switch? Thank you very much.

25 THE COURT: And Ms. Zhong, if you can pull that mic

1 down to you. I want to make sure I can hear you. Thank you.

2 MS. ZHONG: Can you hear me now?

3 THE COURT: Yes.

4 MS. ZHONG: Thank you, Your Honor.

5 So why don't we start with slide No. 72.

6 Let's start with the claim language. And Your Honor has
7 pointed out there is really no connection between the
8 pre-regulated input voltage and the input voltage that's
9 received from the edge connection. As Samsung's counsel has
10 pointed out, the pre-regulated input voltage is an input for
11 the buck converters, and there is a separate input voltage
12 from the portion received at the edge connections. The claim
13 otherwise does not place any restrictions on the two terms.

14 And then if we go to figure 16 that the counsel has hang
15 its hat on, if you look at figure 16, it's not a memory
16 module. What it says is a power module. The power module can
17 be part of the memory module or it can be off the memory
18 module. So think about when it's off the module there is a
19 memory module, there is a separate connector where the power
20 module is actually connected to the memory module. So figure
21 16, the caption of it, the description in column 9, lines 39
22 to 41, says figure 16 is a power module illustrating a power
23 module. It's not illustrating the memory module. That power
24 module can be part of the memory module as shown in, for
25 example, figure 12, 13, and 14 illustrated on the same PCB, or

1 as described in the specification for figure 12, it can be off
2 module.

3 So Your Honor got it right--the pre-regulated voltage
4 need not be generated on the same PCB as the memory. They can
5 be off module. The patent the inventors anticipated and
6 described both possibilities, and that's in, for example,
7 column 26, lines 26 through 35.

8 So in column 26 through 35, they contemplated both having
9 the second power module 1080 on the same PCB as a memory
10 module as the rest of the memory or it's to be off. And the
11 power module is exactly the same.

12 If Your Honor doesn't have any additional questions, we
13 will rest on the paper at this time.

14 THE COURT: All right. Thank you, Ms. Zhong.

15 MR. McKEON: Your Honor, a quick response to that?

16 THE COURT: Certainly.

17 MR. McKEON: And again, Your Honor, I just want to
18 emphasize, the description regarding having the power module,
19 you know, removed from the memory module, that's in column 26
20 with connection with figure 12, and then -- and counsel cited
21 that, you know, being at line 30. And the point is that
22 description does not appear anywhere in connection with figure
23 16, and the claims here are clearly directed at figure 16. If
24 you're talking about buck converters and all that, that's
25 figure 16. That's -- the only disclosure of the system is

1 figure 16. And the fact that that same description that
2 counsel pointed to is not anywhere near figure 16 description
3 really tells -- I think tells the reader and one of ordinary
4 skill in the art that this is a different configuration of
5 figure 12. And with respect to figure 16 description, what
6 the claim corresponds to, these are done on the module. And
7 again, the word -- the 'pre-regulated' language I think
8 supports that.

9 With that, Your Honor, unless you have any questions, we
10 can turn to the next term.

11 THE COURT: All right. Thank you, Mr. McKeon.

12 MR. SHEASBY: Mr. McKeon, I already said I was going
13 to rest on -- just to make it more efficient, the next three
14 I'm going to rest on.

15 MR. McKEON: Thank you.

16 THE COURT: All right. So I'll hear from the
17 Defendant on anything on the C and D terms.

18 MR. McKEON: Thank you.

19 On this one, Your Honor, if I may -- so 'first',
20 'second', 'third', and 'fourth'. And I think the issue here,
21 Your Honor, is what is 'distinct'. And as Your Honor -- you
22 know, the case law is clear that, you know, these need to be
23 distinct. So we're having an issue about what is 'distinct'.
24 And I think, you know, were -- the construction, as Your Honor
25 put in the preliminary, 'distinct' is just physically

1 separate; it's distinct, and in our -- we're going further
2 than that; we're saying yes, you've got to have that, but you
3 also -- in the context of this patent and this art, 'distinct'
4 also needs to be distinct in value. So, you know, separate
5 and then distinct in terms of the values.

6 And on this point, Your Honor, there's a case
7 *Alexsam/Cigna* case that we cite in the brief, and the issue
8 there was the first database distinct from the second
9 database. And this is one of your decisions, Your Honor. And
10 what you held there, you know, you held they have to be
11 distinct consistent with the case law, but then you said, you
12 know, you're not going to get into the issue about what that
13 means in the context of that dispute. You felt that was
14 something the jury should decide. And what we would invite
15 here, Your Honor, is this same result. Let 'distinct' -- we
16 all agree they have to be distinct, and there's no dispute
17 about that. And what we would invite, Your Honor, is sort of
18 following the logic of the *Alexsam* case and let's let the jury
19 decide the context of this patent and technology--you know,
20 what does it mean to be distinct. And I think that's
21 something that our experts are going to get up there and talk
22 about and that's something that the jury can ultimately decide
23 in the context of this technology and this patent.

24 THE COURT: You know, in the *Alexsam* case, what we
25 were concerned about was the issue there you have a single

1 database and one side wants to draw lines and partition it
2 into allegedly multiple databases, and that was the fact issue
3 that was involved with whether they were distinct. I don't
4 see that there's a similar issue here with these first through
5 fourth voltages, but --

6 MR. McKEON: Yeah. I mean, I guess, Your Honor, the
7 -- I mean, I would say the logic applies equally and, you
8 know, so I get the line-drawing point is it a distinct debate
9 as different in nature, but fundamentally, you know, whether
10 the voltages first, second, and third are distinct in the
11 context of this technology, you know, ultimately that's the
12 question at hand here, and I think that was -- I think that's
13 best left to the jury in this context, following the same
14 logic.

15 THE COURT: Well, I just wanted to make sure that it
16 was clear that the position that I'm taking at this point is
17 that you are right, they have to be distinct, but I'm not
18 agreeing that being distinct means they have to have different
19 amplitudes, and that's what I guess to a certain extent you
20 were talking about before. I understand that may be the
21 highest and best use of this system, but the question is do
22 the claims require it, and that's what I'm struggling with.

23 MR. McKEON: Yeah. And I -- that is certainly the
24 debate, Your Honor, and that's why, you know, I invite the
25 Court to, you know, use the same logic that you did in the

1 *Alexsam* case here and let the jury decide whether in this
2 context what we see here on slide 16 and whether these are
3 distinct, you know, in the context of an accused system or
4 not, and let that just -- the jury decide that ultimately, and
5 leave it at distinct, that will be part of the construction,
6 and then the jury can take it from there.

7 THE COURT: All right. I understand the argument.

8 MR. McKEON: Thank you, Your Honor.

9 THE COURT: Thank you, Mr. McKeon.

10 MR. SHEASBY: So we start with the claim language
11 the Federal Circuit requires. If you look at the claims, it
12 recites one or more regulated voltages, so multiple regulated
13 voltages through the fourth. And then -- that's claim 23 of
14 the '918. And then in dependent claim 29 it makes clear that
15 those regulated voltages can actually have the same amount.

16 THE COURT: Mr. Sheasby, you're a bit taller than
17 your co-counsel. If you could adjust that mic that would
18 help. Thank you.

19 MR. SHEASBY: Not in personality, Your Honor; only
20 in height.

21 You asked this question, which is why would two separate
22 lines give the same voltage, and I gave you one example from
23 the specification that the FPGA operates in different states
24 and, therefore, requires different voltages. There's another
25 example. So if you look at this specification '918, 29, 18

1 through 64, it talks about the wire, the rail for the voltage
2 being provided at 1.8 volts for two amps for 60 seconds. And,
3 of course, what we know from electrical engineering is that
4 voltage is only one aspect of what triggers the load that's
5 placed on a circuit.

6 So the analogy that Doctor Zhong gave to me yesterday was
7 the following: There's a reason why you don't plug in a power
8 strip and plug in four microwaves all at 110 volts into the
9 same circuit, and the reason for that is that you'll short the
10 circuit because the load will be too great. And what this
11 passage is speaking about is the fact that one circuit--this
12 is 1122--is going to provide 1.8 volts, but it's going to
13 provide it two amps for 60 seconds. But you may need the same
14 voltage but different amps and a different load for another
15 circuit, and that's why the specification expressly describes
16 the voltages as being able to be independent even though
17 they're the same amount, because voltage is only one of the
18 three parameters that describe how you feed the modules that
19 you're dealing where.

20 If you go to slide 57.

21 This is another example that we look at. This is
22 from --

23 Slide 56.

24 This is from PNC -- from Samsung's own papers. This is
25 Exhibit 30 to our reply at papers 15 and 30. And they

1 acknowledge this as well, that separate voltages can have the
2 same amplitudes.

3 So this is I don't think anything esoteric or funny.
4 This is a basic element of electrical engineering, which is
5 that you may want different rails or different pipes all
6 differing the same voltages because voltage is only one of the
7 parameters that is contributing to the load you need to feed
8 from those circuits.

9 I'll rest on that, Your Honor, unless you have any
10 questions.

11 THE COURT: All right. Thank you, Mr. Sheasby.

12 MR. SHEASBY: Thank you, Your Honor.

13 MR. McKEON: Just a brief response, Your Honor?

14 THE COURT: Certainly.

15 MR. McKEON: Just for the record, and we do take
16 issue with the description that the specification discloses
17 using the same voltage in these different components and, you
18 know, Mr. Sheasby pointed to some extrinsic evidence Samsung
19 documents regarding how their systems -- well, I guess it's a
20 JESD bag. But the point is in the specification there's no
21 disclosure of that in the specification.

22 THE COURT: Well, I guess the question is, what I
23 understand from the Plaintiff's argument is that they're
24 saying that's a reason why it would make sense for the
25 capability to have different voltages but not a requirement.

1 And if you want to rebut the argument that it would be useful
2 to be able to have the same voltages from the different
3 circuits, then tell me about it, but that is what I'm
4 struggling with--just because the embodiment shows separate
5 voltages, does that make it a limitation.

6 MR. McKEON: And I would say yes, Your Honor, in
7 this context. I mean, again, there is just no disclosure
8 where you have it -- they'd have the -- they would be the
9 same. And then, of course, in the context of the patent,
10 where you have these various buck converters, they're going to
11 different places, and there's no disclosure that you would
12 have -- that a particular FPGA in one system would have the
13 same voltage as an FPGA in another part of the system.
14 There's no disclosure on that. And yes, you can have
15 different FPGAs, but there's no disclosure that they would
16 necessarily have the same voltage.

17 And maybe in a real-world system you would have
18 situations where that would be the case, but we're limited to
19 what we've got here in the patent documents. And when you
20 have this disclosure that's very specific in terms of the
21 different values of these signals and nothing else, then, you
22 know, we think that's limiting.

23 THE COURT: All right. I do understand the
24 argument. Thank you.

25 MR. McKEON: Thank you, Your Honor.

1 MR. SHEASBY: Your Honor, we'll rest on -- I think I
2 just referred Your Honor to the passage 29, 33 through 64
3 which talks about a flash and DRAM, two separate components
4 both at 1.8 volts, and we disclosed them being fed by separate
5 independent lines.

6 And with that, as to term E we'll rest as well, if my
7 brother would like to argue that in the first instance.

8 Term E. Did you want to argue term E?

9 MR. McKEON: Your Honor, we're going to rest for D,
10 E, and F. We will rest on the papers.

11 MR. SHEASBY: So with Your Honor's permission, we
12 will argue F.

13 THE COURT: All right. Go ahead.

14 MR. SHEASBY: Thank you, Your Honor.

15 MS. ZHONG: Slide No. 80, please.

16 It's our position that the memory module should be
17 limiting because it provides the antecedent basis for the test
18 in the body. That's consistent throughout the claims. For
19 example, claim No. 1, the preamble says a memory module, and
20 that provides the antecedent basis for the end of the memory
21 module at the end of the first limitation. There is
22 well-established case law that says if the -- a term that's
23 appearing in the preamble provides the antecedent basis for
24 the text in the body, then that particular phrase should be
25 considered unlimiting.

1 And with that I will rest.

2 THE COURT: You know, it can be limiting because it
3 provides antecedent basis, but this certainly looks like
4 nothing more than a statement of an intended use of the
5 device. Does it provide any other meaning to it other than
6 the intended use?

7 MS. ZHONG: Well, it requires -- if Your Honor looks
8 at --

9 Let's go back to claim No. -- slide 81.

10 The first limitation is, A printed circuit board having
11 interface configured to fit into a slot, and that interface is
12 required to include a plurality of edge connections, to couple
13 power, data, address and control signals between the memory
14 module and the host system. So that provides a context.

15 There is an interface -- think about the DEM. There is a
16 bunch of gold fingers on the edge. And that gold edge, those
17 gold fingers are supposed to provide power data and control
18 signals between the host and that memory module, like the DEM
19 board. So it provides a context of it--what is that interface
20 coupling. So the memory module provides that context. It's
21 not an intended use. It provides -- defines a physical
22 structure where the interface needs to couple the signals
23 with.

24 THE COURT: So you're saying without the preamble
25 being limiting, it does not -- the claim does not define a

1 complete apparatus?

2 MS. ZHONG: Well, it makes clear that the printed
3 circuit board -- the interface on that printed circuit board
4 is providing the -- is coupling the signals between the host
5 and that system. So everything else -- for example, the
6 voltage conversion, the plurality of the component coupled to
7 that is part of the memory module between which -- and the
8 host system the interface is providing the conduit, or like
9 the pass way for the signals. So it does provide the context.

10 THE COURT: So you're saying that if we don't
11 construe the preamble as limiting, the claim will not be
12 clear as to what the -- whether the device is the memory
13 module that's referred to at the end of the first limitation?

14 MS. ZHONG: That's correct. For example, whether
15 the voltage conversion circuit needs to be part of the memory
16 module or not, then it's not going to be clear.

17 THE COURT: All right. Thank you, Ms. Zhong.

18 MR. McKEON: Okay. All right. So Your Honor, just
19 where you started, I mean, this really is intended use. The
20 point is here you have this printed circuit board, and the
21 printed circuit board is doing various things and it's just
22 doing this coupling between these other things. These other
23 things aren't part of -- it doesn't indicate here specifically
24 that they're part of what the printed circuit board is doing.

25 And I think the case that we think is on point here, Your

1 Honor, is, you know, your ruling in the *Sol IP* case where we
2 had the same situation where we had a reference to the
3 wireless communication system that was in the preamble, and
4 Your Honor, you know, the same logic really that applies here
5 is that it really doesn't overcome that presumption that, you
6 know, it's not limiting. And you don't -- it's not really
7 part of the claim and part of the system that's claimed. Even
8 though it is, in fact, referenced, you know, within the body
9 of the claim, it's not really doing anything, and particularly
10 in the case we have here which is really an intended use
11 situation.

12 THE COURT: Well, the argument I'm hearing from the
13 Plaintiff is that it may not be clear that the memory module
14 identified at the end of the first limitation is the device
15 itself, the claimed device. Do you believe that it is clear
16 that the memory module within the first limitation is the
17 overall device even if the preamble is not limiting?

18 MR. McKEON: Well, I think what's required is that
19 the printed circuit board do these things. Right? It has the
20 plurality of edge connections configured to couple power,
21 data, and address and control signals. And the point there is
22 the coupling that it's performing, this thing you hold in your
23 hand, the coupling it's performing is between the memory
24 module and the host system.

25 And, you know, the host system here has no antecedent

1 either. I mean, it doesn't --- I mean, that particular term
2 doesn't have any antecedent. The point, though, is -- well, I
3 guess it does. I take that back, Your Honor. It's up in the
4 other -- in the top here.

5 But the point is that these two separate modules and the
6 system for the host system, they're outside of what we're
7 talking about here. And the only thing that the printed
8 circuit board is doing, it's making sure that these power,
9 data, address and control signals, that it's coupling between
10 these two systems. And so I don't --

11 THE COURT: Well, the PCB that's claimed in the
12 first limitation is claimed as part of the memory module,
13 isn't it?

14 MR. McKEON: Well, it's a comprising term. Right?
15 So it would include -- you know, it would include memory --
16 the memory module will have a PCB, a voltage conversion
17 circuit, and a plurality of components. That's how you'd read
18 the claim, for sure.

19 THE COURT: Well, I guess what I'm hearing from the
20 Plaintiff is the concern that if the preamble is not limiting,
21 that first limitation could be read as referring to a memory
22 module that is not part of the device that's claimed; that it
23 is just referring to a connection between some unclaimed
24 device, the memory module, and the host system.

25 MR. McKEON: I -- yeah, Your Honor. I don't -- I

1 guess I don't agree with the argument. I mean, the point is
2 here you have the memory module, and it's not like the
3 antecedent goes away and is irrelevant. You know, it still
4 guides your -- how this claim operates. It's clearly -- the
5 memory module that is at issue here is the one that the
6 printed circuit board is sitting on, but doesn't mean -- it
7 doesn't mean that all of the sudden the memory module is a
8 requirement of the claim. It's just saying that between the
9 memory module that the printed circuit board is sitting on and
10 the host system, that's where these -- this connection is
11 occurring, between those two things.

12 THE COURT: What difference do you see it would make
13 if we construe the preamble as limiting?

14 MR. McKEON: Well, I mean, in terms of how it
15 impacts the case, Your Honor, I -- you know, it's not clear
16 the scope of the impact that it would have. But, you know,
17 for just ordinary rules of claim construction here, I think
18 this is a situation where we wouldn't want that to be limiting
19 based on the fact that this is really, you know, an intended
20 use situation. And despite the fact that the memory module is
21 referenced in the text of the body of the claim, you know,
22 it's not limiting in the context here.

23 THE COURT: I guess what I'm going to have to figure
24 out is whether I think that the preamble gives life or meaning
25 to the claim in view of the argument that the memory module in

1 the limitation could be understood to be something other than
2 the claimed device. But anyway, I'll -- I will look at that
3 further.

4 MR. McKEON: Okay. Thank you, Your Honor.

5 THE COURT: Thank you, Mr. McKeon.

6 MS. ZHONG: Your Honor, just one clarification. The
7 reason we want to make sure that the memory module is limiting
8 is to make sure that each of the claimed elements, printed
9 circuit board, voltage conversion circuit, and a plurality of
10 the components, we want to make sure these are all part of the
11 memory module. Without that, there could be confusion. And
12 it doesn't seem that Samsung's counsel disagrees with it. We
13 want that. We just want the clarity so there is no argument
14 down the road.

15 THE COURT: All right. I understand that position.
16 Thank you.

17 That takes us to the 'array die' term.

18 And I can tell you, Mr. Sheasby, that the basis of this
19 construction is the prosecution history disclaimer argument,
20 in case that wasn't clear.

21 MR. SHEASBY: Understood, Your Honor. And let me go
22 straight there.

23 So this is the passage from the prosecution history, and
24 it does, indeed, say that Rajan merely discloses DRAM circuits
25 206A through D, which are different from the array dies. And

1 I understand that Your Honor has concluded that that is a
2 disclaimer. The issue that I have is that -- we understand
3 that -- does Your Honor intend to give anymore guidance as to
4 what the DRAM circuits are that is excluded, or will that be
5 for the experts to analyze?

6 THE COURT: That would be for the experts. I do not
7 intend to try and define what DRAM circuits that are
8 disclaimed.

9 MR. SHEASBY: I understand, Your Honor.

10 With that clarification, there's no need for any
11 additional argument. Thank you, Your Honor.

12 THE COURT: All right. Thank you.

13 MR. COLVIN: Your Honor, Samsung will rest on the
14 papers for that term as well.

15 THE COURT: All right. Thank you, Mr. Colvin.

16 MR. SHEASBY: Your Honor, we will rest as to H on
17 the papers.

18 THE COURT: All right.

19 MR. COLVIN: Samsung will also rest on the papers,
20 Your Honor.

21 THE COURT: Thank you, Mr. Colvin.

22 MR. SHEASBY: And I believe that I, J, and K are all
23 the adoption of our positions, and so if Samsung wants to
24 argue those I'll allow them, obviously. So we don't have to
25 jump up so often. I won't allow you to do anything. You can

1 do whatever you want. My point is that I won't sit up here,
2 and let you guys do what you want.

3 THE COURT: All right.

4 Doctor Albert.

5 DOCTOR ALBERT: Good morning, Your Honor. Frank
6 Albert for Samsung.

7 The first term here, term I, 'before receiving the input
8 C/A signals corresponding to the memory read operation', and
9 Samsung's proposed construction is 'during one or more
10 previous memory operations'. What we believe is this provides
11 clarity to the term, it is based on admissions made by Netlist
12 during the prosecution, as well as the clarity provided by the
13 specification.

14 Let's take a look at the claim here. So the highlighted
15 portion here is the actual claim language that we're
16 discussing, 'before receiving the input C/A signals
17 corresponding to the memory read operations at the module
18 control device'. It's 'before receiving' that is the thrust
19 of the attention here. That portion of the claim relates back
20 to an earlier part of the claim, 'receiving at the module
21 control device input C/A signals corresponding to the memory
22 read operation'.

23 The second half of the construction, the thrust of the
24 discussion here is determining the first pre-determined amount
25 based at least on signals received at the first data buffer.

1 So really the question is when is it linked between -- when is
2 it that determining the pre-determined amount, when does it
3 actually happen; what does 'before receiving the input signals
4 corresponding to the memory read operation at the memory
5 module' mean in the context of this claim, this patent, this
6 prosecution history.

7 So if you look to the patent, figure 18 provides a good
8 illustration of that. We start off with steps 1810 and 1820.
9 There's a previous write operation. You can see that in
10 1820--'receiving a write strobe signal'. And then based on
11 that previous memory operation, a pre-determined amount of
12 delay is generated. It says right there in 1830, 'generating
13 a delay signal according to the time interval'.

14 Now, later on when we receive a read signal in 1860 and
15 1870, that read signal, there's going to be a delay in the
16 read strobe here at 1880 based on that pre-determined amount
17 that was determined earlier during that previous memory
18 operation.

19 Now, if you look to the specification, over and over and
20 over again is the determining that pre-determined amount
21 that's linked to that previous memory operation. Here we have
22 some examples. Patent -- '506 Patent at 4, 9 to 19, single
23 alignment circuits that determine during the write operation
24 the time interval. Again, the time interval is used during
25 subsequent read operation to time transmission of the read

1 data to the memory controller. Another example --

2 THE COURT: Mr. Albert, the passage that you just
3 read starts with "Further, in one embodiment". Why should I
4 take that as a limitation?

5 DOCTOR ALBERT: It's not just this embodiment, Your
6 Honor. It's over and over and over again in the patent. And
7 if you look to the prosecution history as well, they actually
8 explain, further explain what this means. So let me -- I
9 could fly by these other slides, Your Honor. These are just
10 additional examples of time and time again where the patent
11 talks about determining that time, that delay time based on
12 the prior write operation, prior memory operation. And Your
13 Honor is very familiar with, you know, the law on consistent
14 description in the specification helping to construe the
15 patent and the claim terms.

16 I mentioned the prosecution history, Your Honor, and
17 here's what I'm getting at. There were claims that were
18 allowed--claim 2 is an example of that--where the allowed
19 subject matter read before the memory read operation; very
20 similar to the language that we have here--before the memory
21 read operation. And there was notice of allowance. Claims
22 were going to issue. After that notice of allowance, the
23 patentee went back to the Patent Office and changed the claim
24 language, changed 'before the memory read operation' to
25 'during one or more previous operations'. It did that for

1 claim 2, 3, 4, 5; did it over and over and over and over
2 again.

3 And in the remarks corresponding to that amendment, the
4 patentee said that this change, this changing from--I'll go
5 back--'before the memory read operation' to 'during one or
6 more previous operations', that's not a big change. It said
7 specifically, "...have been amended to address minor issues of
8 clarity and correct grammatical errors. No new matter has
9 been added." The patentee there is saying that these two
10 terms, they mean the same thing.

11 THE COURT: And, of course, we're not construing
12 either of those terms.

13 DOCTOR ALBERT: And I will get to that, Your Honor.
14 Very good question. I had that very same question when I was
15 going through these materials myself.

16 And just to go back to the amendment, of course, the --
17 this change wasn't changing the scope because the Patent
18 Office doesn't allow that. The rules for patent examination
19 say that you can make a post-allowance amendment, but you
20 can't change the scope. So we know that the Patent Office
21 determined that the scope for this change would have been
22 equivalent.

23 Now, we're talking about one or more previous memory
24 operations versus one or more previous operations. Now,
25 Netlist in this case, that was one of the terms that we were

1 seeking to construe. There actually is an agreement for this
2 patent, "'one or more previous operations' means 'one or more
3 previous memory operations'."

4 So getting to Your Honor's question, the claim language
5 that we're seeking to construe here, and I'll come back to it,
6 'before receiving the input C/A signals corresponding'--again,
7 these are corresponding to the memory read operation. Again,
8 going back to that prosecution history, the memory read
9 operation -- 'before the memory read operation' was equivalent
10 to 'during one or more previous memory operations'.

11 So we have equivalent language here in the claim 'before
12 receiving the input C/A signals corresponding to the memory
13 read operation' when Netlist has already agreed to the Patent
14 Office that before--I'll just go back to it--"'before the
15 memory read operation' means 'during one or more previous
16 operations'," which in this case Netlist has agreed in -- you
17 see this in the joint claim construction chart "'one or more
18 previous operations' means 'one or more previous memory
19 operations'."

20 And so with that, Your Honor, I will pass the podium
21 unless Your Honor has any questions.

22 THE COURT: Doesn't that equivalence depend on the
23 context of each claim? I mean, to the extent that there's an
24 agreement, isn't it an agreement that in those claims the
25 claim scope wasn't altered by the different language?

1 DOCTOR ALBERT: Well, we can go back to the claim
2 language itself that was purported to be equivalence, to
3 answer your question. "'Before the memory read operation' is
4 replaced with 'during one or more previous operations'."
5 Again, the language that is being swapped out as equivalent
6 starts with that memory operation.

7 THE COURT: What is there that is unclear about the
8 language that you're seeking to construe? It seems very
9 specific to me.

10 DOCTOR ALBERT: Yes, Your Honor.

11 So the ambiguity here is when this time interval is
12 determined. And here the patent is very clear that that time
13 interval is determined during a previous memory operation. We
14 see it time and time and time again. And then in the
15 prosecution history the two terms are equated as equivalence.

16 So we believe there should be no ambiguity; but to the
17 extent Netlist wants to come in here and claim that's not what
18 this means, that it means something else, then we would take
19 issue with that.

20 THE COURT: All right. Thank you.

21 DOCTOR ALBERT: Thank you, Your Honor.

22 MS. ZHONG: Slide No. 41, please.

23 Counsel mentioned that based on the prosecution history
24 we should be limited to construing the term to the -- the
25 'before' term to 'during one or more previous memory

1 operations'. One thing they forgot to mention in claim 15 is
2 not one of the ones that's actually been amended. Claim 15
3 retained its original language--"before receiving the input
4 command address signals corresponding to the memory read
5 operation at the memory module control device, determining the
6 first pre-determined amount based at least on signals received
7 by the first data buffer." The claim is not amended.

8 Whatever we said about the other claims simply does not
9 apply here. There is no reason, as Your Honor has pointed
10 out, there is no ambiguity as to when the step needs to
11 happen. The only limitation in the original claim is before
12 the receiving step this happens. It can happen during one or
13 more previous operations, and -- but it doesn't have to. And
14 whether in that particular case the one or more previous
15 operations constitutes what Samsung believes to be a memory
16 operation is also not at issue here.

17 What Samsung really is trying to do is trying to bring in
18 their interpretation of the memory operation into this term.
19 That's not -- really there is no basis in either the claim
20 language itself or the prosecution history.

21 So Your Honor has got it right. It should be construed
22 by its plain and ordinary meaning, which is as the claim says.

23 With this we rest.

24 THE COURT: All right. Thank you, Ms. Zhong.

25 DOCTOR ALBERT: Just a very quick remark, Your

1 Honor. That claim 15 wasn't amended is of no moment. What
2 matters here, Your Honor, is that during prosecution they
3 told the Patent Office that these terms, this language was
4 equivalence. Netlist can't take that back and say now it's
5 not equivalence; now -- we meant it for the other claims as
6 equivalent, but we don't mean it for this claim.

7 THE COURT: Why isn't their statement limited to
8 the claims that they were talking about and the claims they
9 were amending?

10 DOCTOR ALBERT: It just doesn't work that way, Your
11 Honor. When you say to the Patent Office this language,
12 wherever it is used, this language is the same, no -- the
13 claims were amended to address minor issues of clarity, so
14 this language that they took before, they changed it to
15 something else to address minor issues of clarity, it means
16 the same thing. Now, we find that same language in the claims
17 that are -- in the claim that we're talking about here.

18 So yes, they didn't amend this specific claim, but the
19 arguments that they made regarding the language, the common
20 language for this claim, the claim 14 as issued, claim 15
21 during the prosecution, would still apply; otherwise, their
22 statement to the Patent Office wouldn't be true.

23 THE COURT: Their statement to the Patent Office was
24 that the scope of those amended claims was -- had no new
25 matter added. Right? I fail to see how you can just assume

1 that the same thing would have been true for any other place
2 that language appears.

3 DOCTOR ALBERT: Fair question, Your Honor, and I
4 appreciate the insight there. The -- if you're asking the
5 question for these claims why hasn't there been new matter
6 added, for all these other claims that were amended why has
7 there not been new matter added if you change the language,
8 the only way that could be true is if those -- that new
9 language didn't increase the scope, didn't change the scope
10 of that claim so, therefore, that language was equivalence.

11 THE COURT: Okay.

12 DOCTOR ALBERT: And so for claim 15, we find that
13 same language in there. Yes, they didn't make the argument
14 regarding claim 15--very good insight, Your Honor, we
15 appreciate that--but they did make the argument with regards
16 to the language that is found in claim 15, as issued claim 14.

17 THE COURT: Except that it's not the same language.

18 DOCTOR ALBERT: It includes broader language, but it
19 includes the same -- references the same memory read
20 operation.

21 THE COURT: You have a tough argument, but you've
22 made it well. Thank you.

23 DOCTOR ALBERT: Thank you, Your Honor. I appreciate
24 the attention.

25 THE COURT: Sure.

1 DOCTOR ALBERT: So we'll move on now to the drive
2 terms.

3 THE COURT: All right.

4 DOCTOR ALBERT: The core dispute with regards to
5 these drive terms is whether the buffer as described in the
6 '339 Patent requires switching between different data pass.
7 Sometimes that's colloquially referred to as a fork in the
8 road where the buffer is -- has outputs to different memory
9 devices and it could switch between groups of memory devices,
10 kind of like a fork in the road.

11 And so here we have in the proposed construction the idea
12 is expressed by activating certain groups of memory devices
13 while at the same time deactivating other devices. You select
14 between one group and another group. And we're talking about
15 a number of claims here, but they all have this drive concept,
16 it's built into this very large claim -- you know, very large
17 limitation. I apologize for that, Your Honor. We didn't
18 write the claim; we just have to try to figure out what it
19 means. But here we have this idea that you have this logic
20 configurable to control the data path seen in claim 1. It
21 actively drives the section of the data from a first side to
22 a second side. So the question is, for this patent with this
23 prosecution, what does that -- what do those drive terms mean?
24 Does it include that fork in the road?

25 If you look to the '339 Patent, these data buffers are

1 really to accomplish two things, and the first is "to
2 electrically couple only the enabled memory devices to the
3 memory controller"--and so here I've got this highlighted in
4 yellow on the left--"by using the data transmission
5 circuits"--that's also called the buffer--"to electrically
6 couple only the enabled memory devices to the memory
7 controller." Now why is it doing that? It says it right
8 there at the top--"to reduce the memory device loads seen by
9 the system memory controller."

10 So their idea was that memory -- that loads were a
11 problem, and to address that problem, they would isolate and
12 couple -- isolate some groups of memory devices; couple other
13 groups.

14 So you move onto the second function is "to electrically
15 isolate the other memory devices which are not performing the
16 memory operation"--and here I've got it highlighted in pink on
17 the lower left--"and to isolate"--excuse me--"electrically
18 isolate the other memory devices 412 from the memory
19 controller." So this idea --

20 THE COURT: All of that is described as 'desirably
21 achieved in certain embodiments'. Right?

22 DOCTOR ALBERT: Well, there are no other
23 embodiments, Your Honor. And there is a dispute about that,
24 and I will go through that.

25 THE COURT: Okay.

1 DOCTOR ALBERT: The reason, the basis, the
2 motivation behind this coupling and isolation and switching
3 between the two paths is to reduce the device loads. And as
4 Your Honor is well aware that this problem to be solved is an
5 important consideration in claim construction.

6 So here I have an illustration of figure 5, and I'll walk
7 through that. That shows exactly how this is described in the
8 patents--excuse me--in the '339 Patent. And the core concept
9 from figure 5 is this path A and path B. Here I've got that
10 highlighted in figure 5. The text is, "Whereby the control
11 logic circuitry selects either path A or path B to direct the
12 data." So you can send the data one way or you can send the
13 data a different way. You're selecting between the paths.
14 The selection that the patent is talking about is the
15 selection between two different paths. And going back again,
16 that selection is to address the problem of the device memory
17 loads.

18 So going back to figure 5, it goes on, "When the control
19 logic circuitry receives, for example, an enable A signal."
20 So I've got this enable A signal that turns on this top A
21 path. The top A path has a tristate buffer. It's labeled
22 504. That's enabled and actively drives the data value on its
23 output, while the second tristate buffer 506--so I have marked
24 out in red--is disabled with its in output a high impedance
25 condition. So you have a selection between a path A and a

1 path B.

2 So here we just have that illustration. In this state
3 the data transmission circuit allow it is data here from --
4 you know, from the 420 line to go up through the tristate
5 buffer and onto Y1, which is that path A.

6 Here is just another figure showing the same idea. Here
7 we have a -- the buffers are transmission circuits 416 kind of
8 in the left middle just to the left of the highlighting, and
9 they in path A are connected to two sets of memory devices.
10 They're not connected to all memory devices; they're connected
11 to two sets. So you've got this path A that connects to this
12 we'll call ranks A and C.

13 Now, the patent also talks about the alternative if you
14 want to go down path B. So if you enable B, then what you're
15 going to have there is that the tristate buffer A that was
16 previously activated and turned on, that is closed. Path B
17 becomes open; path A becomes closed. And now here the data is
18 directed to that path B terminal Y2. And that, again, is
19 illustrated in a different figure in figure 3A. Instead of
20 the A and C ranks being activated, the B and D ranks are
21 activated.

22 So you've got this idea between a path A and a path B
23 where some memory devices are accessed in path A and some are
24 accessed in path B. Again, it's to implement this idea that
25 they have this problem they are trying to solve of reducing

1 the load. This was their solution to the problem that the
2 named inventors perceived.

3 There's a similar description on the receive side. If
4 you -- receiving data from the memory elements into that Y1
5 and Y2 terminals, then the patent has a way to deal with that,
6 and that is this multiplexer 508--I've got that
7 highlighted--and what the patent does is it says, Well, I've
8 got this two different inputs; I'm going to select -- selects
9 one route to it's output. So again, we have two paths, the
10 selection -- this concept of selection between two different
11 paths.

12 And going through the patent, time and time again the
13 patent is talking about the selection selectively allowing or
14 inhibiting the data paths. Here we have some examples. '339
15 8, 41 through 53 references the module control signals by
16 selecting or allowing the data transmission between the system
17 memory controller, column 339--excuse me--column 10, 64
18 through 11:4 it's discussing these load reducing switching
19 circuits. So again, we see that switching language to
20 describe reducing the load by switching the paths between a
21 path A or path B or group A and group B with this idea of this
22 selectively switching between the paths is referenced over and
23 over again in the patents.

24 Here we got it again at 11:35 to 44 discussing "data
25 transmission circuit selectively switches between two or more

1 memory devices." 15:33 through 38, it switches a single data
2 line between the memory controller and the memory device.
3 Again, switching, switching, switching. It is talking about
4 that concept over and over again. '339, 17:30 to 44 talks
5 about enabling the proper data pass between the system memory
6 controller and the targeted or selected memory devices.

7 That right there is enough, Your Honor. The consistent
8 and uniform description of the patent with the idea of the
9 switching illustrates the concept of the -- what these claims
10 are meant to cover; what these claims do cover by enabling the
11 data paths, according to the claim language; by driving the
12 signal from one side to the other, according to the claim
13 language.

14 But the patentee also distinguished prior art during
15 prosecution. One of the pieces of prior art was this prior
16 art Ellsberry, and it says, "Ellsberry does not
17 disclose"--this is what Netlist said during
18 prosecution--"disabling data paths in its memory bank
19 switches. The claimed invention allows controlling of the
20 data paths between the memory devices and the bus interface."
21 They go on to say, "On the contrary, Ellsberry teaches away
22 from switching the data paths in its memory banks." Again,
23 very -- you know, this same language is repeated over and over
24 again in the specification--switching the data paths.

25 So we have, again, going back to that claim language of

1 driving the different data paths and selecting and switching
2 between those data paths again all comes back to reducing --
3 this is this solution for -- that the patentee chose to
4 implement their -- the solution to the perceived problem of
5 load on the system.

6 Now, there is a dispute about whether the specification
7 actually does disclose an alternative embodiment, whether
8 there is a reference to an embodiment where there isn't a
9 switching between data paths. And Netlist makes a -- puts
10 this in the brief. This is -- I have the language that
11 Netlist put in their brief, and the bolded and italicized
12 section is the same language that Netlist bolded and
13 italicized in their brief, I believe. What they didn't do,
14 however, is point Your Honor to the highlighted portions which
15 I'd like to discuss.

16 So this language, "One or more of the data transmission
17 circuits 416 in accordance with an embodiment of the
18 disclosure is operatively coupled to one or more of the data
19 lines 452 connected to one or more memory devices in each of
20 the ranks." Now, Netlist makes a big deal about the
21 recitation of the one saying, Well, that's the idea, there is
22 no fork; that there can be no fork if there's only one, but
23 that's not what -- where this sentence ends, because this
24 sentence ends with "in each of the ranks A, B, C, D." And if
25 I have a data line to a device, memory device, but for each

1 rank that's going to be multiple data lines, that's going to
2 be multiple paths.

3 And it repeats it again down below, but then it
4 specifically references figure 3 as an illustration of this
5 concept. And Your Honor, we already saw figure 3. I showed
6 it to you just a few minutes ago, but here is figure 3 again
7 where I've repeated the highlighting from my earlier slides
8 where we don't see in figure 3 a single line, a single
9 straight line embodiment, as Netlist has coined the phrase,
10 but a -- again, a fork-in-the-road embodiment where it goes to
11 one group for one path and another group for another path. So
12 this language that Netlist places so much stock into is really
13 just an illustration again of figure 3A which shows the fork
14 in the road.

15 So what does Netlist then do? Netlist then takes this
16 concept, this single word out of context and says, Well, if it
17 does mean one, then we can just change all of the figures to
18 have a straight line embodiment. And this was kind of strange
19 to us because I've never seen this in a brief, but they've
20 taken figures and erased portions of the figures to say,
21 Voila, there is your straight line embodiment; there is your
22 no fork in the road? But what they've done is they've erased
23 and deleted parts of the figure that describe the fork in the
24 road. So they did it here for figure 4, they did it for
25 figure 3, they blacked out this -- the other prong of the fork

1 to claim that there is now a -- not a fork in the road here.
2 But the figures themselves describe this fork-in-the-road
3 concept; the patent specifically describes this
4 fork-in-the-road concept. And it's very uniform in that
5 description about that switching between the data paths.

6 This was in their reply brief, a reference to 16:38
7 through 45. "In yet another embodiment, the multiplexer and
8 the read buffer operations may be split over two tristate
9 buffers, one to enable the value of Y1 and another to enable
10 the value from Y2." And sometimes they claim the tristate
11 buffers can operate independently and, therefore, that somehow
12 shows the straight line embodiments.

13 And so what I have here on the right--I'll be very
14 clear--this was our attempt to try to put into a picture what
15 was described, but we didn't see a picture in the brief so
16 this is our attempt to replace the multiplexer with these two
17 red tristate buffers. So what I have here in red is not in
18 the patent; it's an attempt to illustrate the replacement of
19 the multiplexer that's described in the specification as
20 another possibility.

21 And Netlist says, Well, if those two tristate buffers
22 operate independently, then that would be a straight line
23 embodiment because you'd have independent operation. And
24 there's two things that are wrong with that that we saw in
25 their reply brief is that, one, we -- the patent doesn't

1 describe 'independent operation' of these replacement tristate
2 buffers; it just mentions that you can do it in -- you know,
3 in some way. It doesn't describe 'independent operation'. Go
4 through the patent; it's going to be nothing that describes
5 that.

6 And you wouldn't do it that way because that wouldn't
7 work. If you had these two tristate buffers and you were
8 operating them independently, both of them are receiving
9 memory read operations--or sorry--data from the memory devices
10 through this Y1 and Y2, if they are single lines, you know,
11 single straight line embodiments, what's going to happen is
12 that that independent operation--again, not in the
13 patent--would cause that data to merge onto the same line and
14 crash together. That's not a product or an idea that you'd
15 want to implement.

16 So the patent doesn't describe this independent
17 operation. Netlist says that you could do it independently,
18 but that's not described in the patent. So again, this is
19 another thing that Netlist pointed to as somehow describing an
20 alternative embodiment that it could be a straight line
21 configuration or not a fork in the road, but the point here is
22 it doesn't disclose that, and the way Netlist argues they
23 would work would cause the system problems.

24 Netlist put a lot of stock into two prior ITC cases, the
25 1023 investigation, 1089 investigation, arguing that, Well,

1 for the 1023 investigation that that involved different claim
2 language and that claim language isn't involved here; so even
3 though the 1023 found that those claims required a
4 fork-in-the-road implementation, that same exact claim
5 language is not found in this case. The claim language that
6 was issued there was this 'selectively isolate selectively
7 allow' language. But again, that's the same language,
8 'selectively', that was repeated over and over in the
9 specification but also in the prosecution in -- for this
10 patent.

11 And then for the 1089 investigation, the -- that was a
12 bit of a strange posture, Your Honor, because the ALJ decides
13 an issue and then the commission gets to review it. And here
14 the ALJ reviewed the fork issue, found for those claims didn't
15 require a fork, but the commission reversed the infringement
16 finding, and it did that on this term 'receive' which required
17 that all of the--excuse me--that -- and built into this
18 'receive' concept was this idea that not all of the memory
19 elements could receive the memory operations. In other words,
20 some would receive it, some would not, and because the
21 products in that case, all of them received the memory
22 operations, there is no infringement.

23 So again, we have the split between some devices having
24 some access, access -- memory operations grouped between a
25 different set of devices. And so, again, the commission

1 didn't use the word 'fork in the road' to specifically
2 implement its decision, but built into that concept, built
3 into that decision and that concept was this fork-in-the-road
4 idea.

5 But again, we're not relying -- we're not saying that
6 these two cases are controlling. We're asking the Court to
7 look at the facts of this case, the claim language of this
8 case where the claim language discusses the driving of the
9 data, activating the pass, and the prosecution history of this
10 case which describes the selection that was used to circumvent
11 the prior art.

12 THE COURT: Mr. Albert, can you go back to your
13 slide with figure 5 from the patent; not the modified version,
14 but the actual version?

15 The fork in the road that you're describing is the place
16 where path A and path B split off at the top of figure 5
17 there. Is that right?

18 DOCTOR ALBERT: That's exactly right, Your Honor.
19 So we'd have the two paths, path A and path B going -- and
20 they would go through different terminals, Y1 and Y2.

21 THE COURT: Do you contend that you cannot drive a
22 signal along path A without disabling path B? In other words,
23 are you taking the position that it's not electrically
24 possible to do that?

25 DOCTOR ALBERT: Well, that's -- the patent doesn't

1 describe a dual operation of both path A and path B.

2 THE COURT: I know. My question is a different
3 question. Do you contend that you cannot drive a signal along
4 path A without disabling path B?

5 DOCTOR ALBERT: Not with this circuit as disclosed
6 in the '339. Now --

7 THE COURT: I don't know what that means.

8 DOCTOR ALBERT: Engineers are very bright, and you
9 can certainly create a different circuit with a different
10 disclosure that could drive different pins at the same time,
11 but that's not the disclosure or the circuit we are discussing
12 here. The disclosure for this circuit would be in either path
13 A or path B.

14 THE COURT: All right. And my question is do you
15 contend that you cannot drive a signal along path A of this
16 circuit without disabling path B.

17 DOCTOR ALBERT: Yes, that is the way that the patent
18 describes the path A path B operation.

19 THE COURT: All right. So you're answering about
20 your interpretation of the disclosure in the specification and
21 I'm asking about the figure as it appears there, but
22 anyway --

23 DOCTOR ALBERT: To put a finer point on that, Your
24 Honor--I don't mean to duck your question--the -- if you look
25 to see, there is a control going into the tristate buffers

1 that we have -- you know, 430 goes into 502, and then that
2 controls the different tristate buffers. The way that this
3 circuit operates, the way that this circuit -- this particular
4 circuit with this control scheme operates is that you would
5 not be able to drive it onto path A and path B because of that
6 control circuit. Now, if we took out parts of the figure
7 where there wasn't that control and put something else in,
8 then, you know, maybe it might be possible, but I'm -- we're
9 not seeing it with this control circuit.

10 THE COURT: All right. Mr. Albert, let me go ahead
11 and take the morning recess now. We'll come back and hear if
12 you have additional remarks and then the response.

13 DOCTOR ALBERT: Thank you, Your Honor.

14 THE COURT: Thank you.

15 (Brief recess.)

16 THE COURT: Thank you. Please be seated.

17 Mr. Albert, do you have anything further on this term?

18 DOCTOR ALBERT: Nothing further on this term, Your
19 Honor.

20 THE COURT: All right. Thank you, sir.

21 MS. ZHONG: So the counsel has argued at length
22 focusing on the full rank embodiment of the '339 Patent. What
23 the counsel fails to mention is that the specification is very
24 clear. Even though the description is with respect to four
25 ranks, embodiments with less than four ranks, including two

1 ranks per memory record 402, 402 prime may be employed. And
2 why is that important? It is important because if you only
3 have two ranks, a single path is sufficient.

4 For example, if we look at figures 3A, there are two 452
5 lines--one 452 connecting the purple colored 416, which is a
6 data buffer, to ranks A and C. There is a second one that we
7 have grayed out that's connecting data buffer 416 to the two
8 other ranks B and D. But if you only have two ranks, A and C,
9 a single pass is needed, so there is no need for the fork in
10 the road. That's a straight line configuration there. And if
11 we don't have a second line, disabling the second line just
12 doesn't make any sense. And the claim does not require that
13 there be four ranks with two different paths.

14 And why do we know that the two ranks is actually
15 contemplated by the invention? Let's go back to what the
16 counsel said. The purpose of this invention is load
17 reduction. If Your Honor take a look at figure 2A, figure 2A
18 as described in columns 5, lines 44 to 64, that's a prior art
19 configuration with two ranks. And in particular, in column 5,
20 lines 45 to 48, the inventors described that with respect to
21 the two-rank operation there is a load problem. Sorry. I got
22 the lines wrong. The lines that's relevant to the load
23 reduction starts actually column 5, lines 59.

24 So with respect to two-rank, they say, "Therefore, during
25 a write operation, the system memory controller 220 sees all

1 the memory devices 212 as its load, the other data lines 250."
2 That is, it sees two ranks of memory modules.

3 And what does our invention do? Regardless of the number
4 of ranks, the invention allows you to -- the memory controller
5 to see a single rank. Where is that disclosed? That's
6 disclosed, for example, in column 14, starting at line 59. It
7 says, "To reduce a memory device load seen by the system
8 memory controller 420, e.g., during a write operation, the
9 data transmission circuit 416 of certain embodiment is
10 configured to be recognized by the system memory controller
11 420 as a single memory load."

12 So even for two-rank, it used to be in a prior art, the
13 memory module sees two ranks of memories and now it sees as a
14 single load, a single rank. So there is load reduction there
15 for two-rank. And for the two-rank, as I show on screen here,
16 a single line is sufficient. You don't need to have a second
17 -- what they call the fork in the road. Without the fork in
18 the road, disabling the second path, as they suggest, is just
19 not justified.

20 Now, I understood that counsel said during prosecution we
21 were talking about selecting or switching the pass on and off.
22 I think it's a misunderstanding of what we were actually
23 saying.

24 So let's look at column -- slide No. 10.

25 The argument is actually saying the data passing

1 Ellsberry switches 206/208 are opened by default. What our
2 claim is really requiring is that that particular path is
3 turned on during a specific time period, and when the data
4 passes on the operation -- the write data or read data is
5 passed on the data pass are then turned off. So when the
6 counsel is talking about switching on, selecting on and off,
7 they're not talking about switching between different paths;
8 they're talking about a single path A is switched on during
9 specific time period. So they're talking about temporal
10 turning on and off, not physical, spatial turning on from --
11 switching from one pass to another. So that was a complete
12 misrepresentation of what we argued during prosecution.

13 With respect to Your Honor's question regarding figure
14 No. 5 --

15 Maybe slide No. 18, please.

16 Figure No. 5, Your Honor asked whether in this particular
17 embodiment it has to be the case that the second pass is
18 turned off. Our understanding is that it doesn't have to be.
19 It can be turned on as in prior art. You can use, for
20 example, a technique called data masking for the write path
21 and the data can be sent and only be selected -- only received
22 -- the useful data is only received by the memory device
23 that's intended to receive the data where the write -- so the
24 data pass can be open, like both can be on at the same time.

25 THE COURT: Would that serve the goals of the

1 invention in this patent?

2 MS. ZHONG: So if you do that, I think you do see
3 some load reduction, not as much, so instead of, like,
4 reducing the load from four loads to one load, you may be
5 reducing it from four loads to two loads.

6 THE COURT: All right.

7 MS. ZHONG: Okay. Does Your Honor have additional
8 questions? If not, we will rest.

9 THE COURT: I think I understand your position on
10 it. Thank you.

11 Mr. Albert, if you want to respond, you may.

12 DOCTOR ALBERT: Thank you, Your Honor.

13 Just a couple of points here.

14 With regards to the point about the possibility of a
15 two-rank system and the argument that, Well, the patent in
16 this invention could have been implemented not using this fork
17 in the road with two ranks, I kept hearing 'could have',
18 'didn't have to be', 'could have been implemented'. That's
19 not what the specification says. When the specification
20 implements this invention, it is always with that fork in the
21 road. And in order to be able to concoct a straight line
22 embodiment without a fork in the road, Netlist has had to
23 alter the figures in the patent, which is telling.

24 So this idea that you could have done something
25 differently, that -- Your Honor, that is the case with every

1 single patent that falls in front of you--that you could have
2 done things differently. The question before this Court is
3 what was disclosed in this specification and this prosecution
4 history. And this prosecution history, again, Netlist in its
5 briefing, you know, put big emphasis on that 'switching'
6 language in the ITC case, and that same language is found in
7 the prosecution history--switching of the data lines.

8 So with that, unless Your Honor has any further
9 questions.

10 THE COURT: You know, Mr. Albert, one of the
11 problems that this proposed construction faces is the fact
12 that you're construing one word with what is probably 200
13 words. I am -- I don't know that I've ever seen a more
14 elaborate proposed construction for a single term.

15 DOCTOR ALBERT: And I'm glad Your Honor asked that
16 question because, unfortunately, this is a byproduct of
17 repeated litigation by Netlist. Netlist asserted these
18 patents in this family against similar technology, was found
19 not to infringe, got continuations repeated, and there's been
20 this serial continuing prosecution for these patents to make
21 longer and longer claims, more complicated claims for this
22 simple idea that there is a fork in the road.

23 So what we have here is not just the word 'drive' that's
24 being construed, Your Honor, because it's not just 'drive' in
25 the abstract; it's 'drive' -- let me just take claim 1, for

1 example. This whole phrase, this complicated phrase that
2 Netlist has put in their patent all goes to this concept of
3 the fork in the road of this switching. It starts with the
4 buffer, including the logic configurable to control the data
5 path. Again, we saw in the specification that that path A
6 control and that path B control, splitting the two paths, the
7 path that the data would ultimately follow and switching
8 between the one group of memory versus the other group of
9 memory, that's built into this phrase as well as other
10 portions of this claim.

11 It goes on to say that the data path is enabled.
12 Enabled. So we're enabling and disabling data paths. So
13 we're -- we have that logic to control the data path, just
14 like that path A and path B embodiment that we saw in the spec
15 that was repeated over and over and over again, the only way
16 that the control is described.

17 And then it talks about driving the data from one side of
18 the buffer to the other side of the buffer. And again, the
19 only way the patent describes that driving, that -- from one
20 side to the other is with this fork in the road. You drive it
21 from, you know, one group or the other group.

22 And then it talks about the -- again, the tristate
23 buffers. I showed those to you in figure 5 where you enable
24 path A, you are enabling the path A tristate buffer and
25 correspondingly disabling because of that control circuitry

1 the path B.

2 So it's not just a single word that's been construed,
3 Your Honor; it's the entire collection of this language. Very
4 complicated, we understand, but it's really results of this
5 continuing serial application that Netlist has undergone.

6 THE COURT: All right. Thank you, Mr. Albert.

7 DOCTOR ALBERT: With that, we will rest on the
8 papers for 'module controller', the next term, Your Honor.

9 THE COURT: All right.

10 MR. SHEASBY: Your Honor, Mr. Tezyan was going to
11 argue that term, and I would like to represent to the Court
12 that he was awesome when we went through it yesterday and it
13 would have been his first argument. So if we could get
14 judicial notice of that, I would appreciate it.

15 THE COURT: All right. We'll direct that his
16 remarks be placed in the record.

17 MR. SHEASBY: Can I have the elmo, Madam Courtroom
18 Deputy?

19 So this is the last term that we are arguing, and the
20 attention is -- and I appreciate the Court's indulgence by not
21 just saying 'plain and ordinary meaning', but actually wading
22 into the dispute. And I think everyone agrees, if you go back
23 and look at the specification, the portion of the
24 specification that guides this is column 50, lines 60, *et seq*,
25 to column 16, lines 5. And the only point I will make, Your

1 Honor, is in that section I have highlighted the relevant time
2 period. The latency is not just the moment that it starts;
3 it's also the moment that it stops as well.

4 In the construction as given in a time period where the
5 start of -- wherein the start of the time period depends on at
6 least the latency parameter, it would create significant
7 difficulty in applying the claim during the infringement phase
8 of the case if the back end of the latency period was not
9 defined.

10 And so consistent with column 15, we would ask that the
11 language -- in fact, we'd be comfortable with the language
12 directly from there where it says "from the moment the memory
13 controller starts to it stops". If we could just use that
14 exact language, we would appreciate it, because it is going to
15 create confusion at the time period in the subsequent case.
16 And I think that a period of time has a beginning and an end.
17 I don't think that's in dispute. And the latency controls
18 both the beginning and the end of that time period, and we'd
19 like to make that clear based on the specification that I just
20 read, Your Honor.

21 THE COURT: All right.

22 DOCTOR ALBERT: Admittedly, Your Honor, I don't know
23 what to make of that. I don't know what's being proposed by
24 Netlist at this point, and I don't know what the dispute is
25 given the statements.

1 THE COURT: It's my understanding of their statement
2 that they are still seeking duration, but that they feel they
3 can get there if the construction includes both the start and
4 the end.

5 DOCTOR ALBERT: And here, Your Honor, perhaps a
6 little bit of clarity as to our understanding would be helpful
7 here.

8 So if you look at the claim language, 'time period in
9 accordance with a latency parameter', Your Honor's
10 construction follows that 'a time period wherein the start of
11 the time period depends on at least a latency parameter'.
12 That was different than Netlist had sought, which is the start
13 and duration depending on a latency parameter. So my
14 understanding of the tentative was that the 'and the
15 duration' was excluded from the construction.

16 THE COURT: That was a correct understanding.

17 DOCTOR ALBERT: And so as Your Honor distinctly
18 tuned into here, the specification discusses latency
19 parameter, discusses latency, and talks about latency is a
20 delay time--right?--something that elapses between one event
21 and another. And Netlist's original construction -- I don't
22 quite know if that's what their getting at right now, but
23 their original construction was not just a delay time--which,
24 you know, you could also call that a duration, a duration of a
25 delay--they wanted a construction of a latency parameter to

1 include the duration of delay--you know, that delay time--but
2 also a second duration, and that's where we have issue with.

3 So we -- Your Honor correctly and keenly tuned into the
4 real issue here that latency is that delay time, as is
5 described in the specification, and the -- it requires no
6 further construction than that. The patent itself says that
7 this is a known thing in the field. Patent -- I couldn't tell
8 whether counsel was saying that the specific description in
9 the patent was an expressed definition that changed the
10 meaning in the field, that differed from the meaning in the
11 field, but the patent acknowledges that this is a known
12 parameter and then goes on to describe it as a delay, and just
13 like Your Honor's construction of a time period where the
14 start of the period depends at least on a latency parameter.

15 THE COURT: I think what we're really construing is
16 what 'time period in accordance with' means here, because I
17 agree with you that there seems to be agreement about what the
18 latency parameter itself is.

19 DOCTOR ALBERT: And the original dispute that -- as
20 I understood it from the briefing, Your Honor, was Netlist
21 seemed to be trying to redefine the term 'in accordance with',
22 which didn't argue in the brief that 'in accordance with' had
23 a very specific meaning, but that was the implication of their
24 argument.

25 You know, based on the Court's construction, you know, we

1 don't have any further points here.

2 I would just go on to say, Your Honor, that, you know,
3 there is an IPR outstanding on this issue, as Your Honor may
4 know. After the briefing finished, the institution decision
5 came out instituting on all claims. And the Patent Office
6 sided with Samsung's construction here, which would be
7 consistent with Your Honor's construction that it -- the
8 time period of that starts based on the latency parameter.

9 So with that and, you know, barring further clarification
10 from Netlist counsel as to whether they mean something other
11 than what Your Honor has written down, we have no further
12 points here.

13 THE COURT: All right. Thank you, Mr. Albert.

14 MR. SHEASBY: Your Honor, I wrote down what counsel
15 said is he, quote, elapses between one time and another as the
16 period, and we agree with that. What we're trying to make
17 clear, and we understand that our proposed construction had
18 issues with sort of second latency period or things like that,
19 that was not our intention. Our point is that the latency
20 period is between two moments. It's not just -- it doesn't
21 just control when the period -- the latency parameter doesn't
22 just control when the period starts; it also controls where
23 the period ends, of necessity. And I think if 15, line 61
24 through 65, which is the same passage that they quote in their
25 brief--they just allied part of that--makes it clear that the

1 period from when it starts to when it ends, and that's the
2 only request we would make consistent with the specification,
3 Your Honor.

4 THE COURT: Well, if the latency parameter is clear,
5 why doesn't 'using it to set the start time' resolve the whole
6 thing?

7 MR. SHEASBY: Because it -- using it -- they will
8 take the position that 'using a latency parameter to set the
9 start time doesn't mean that the latency parameter controls
10 the end time. So they -- their position technically will be
11 that they're not necessarily linked, they're not inherently
12 linked; you can start one -- you can have it start it but not
13 have it when it ends.

14 And so our position is in the specification to latency
15 period, in column 15, lines 61 through 65 makes clear that the
16 latency period is not just the beginning, it's the end. And
17 I'll read that into the record. "The column addressed strobe
18 latency"--that's what we're referring to here; I think both
19 parties agree on that--"is the delay time which elapses
20 between the moment the memory controller informs the memory
21 module to access a particular column in a selected rank or row
22 and the moment the data from the particular column is on the
23 output pins of the selected rank or row."

24 And so the latency parameter controls the entire
25 period--not just when it starts, but when it ends. And

1 Samsung will take the position that it's not inherent, that
2 when it starts -- controlling when it starts means you're
3 controlling when it ends.

4 THE COURT: All right.

5 MR. SHEASBY: Thank you, Your Honor.

6 THE COURT: Thank you.

7 DOCTOR ALBERT: Your Honor, as I understand,
8 Netlist's position is just a rephrasing of their prior
9 construction a time period with the start of the time period
10 and the duration of the time period depends on at least the
11 latency parameter.

12 THE COURT: Mr. Albert, can you describe your
13 position through the use of figure 6? I saw that you had a
14 slide on that a little earlier.

15 DOCTOR ALBERT: Yes. So figure 6 is instructive,
16 Your Honor, because there are -- the patent describes
17 'latency', and with regards to figure 6, the patent also
18 describes these time periods 601, 602, 603. The patent uses
19 different language for that -- to describe latency and the
20 periods. It doesn't link the two together like Netlist's
21 construction is now linking.

22 Latency is just a delay of time. It's found in their
23 own dictionary definition they cited. It's a delay time.
24 We agree it's a delay time. But that's not the crux of the
25 issue, because the crux of the issue is that the -- as Your

1 Honor pointed out with Netlist's -- the dispute really seems
2 to be now is the language period 'in accordance with', and
3 what does that mean; how narrow is that term. And Your Honor
4 correctly pointed out that 'in accordance' means it could be
5 dependent on the start time.

6 Now, does 'in accordance' mean, as Netlist seems to now
7 imply, that every variable has to be defined for that period
8 for 'in accordance'? No. That's not what 'in accordance'
9 means. And if you actually look at the patent, 'in accordance
10 with' is used throughout the patent to describe various
11 things, including some of the figures, which don't have all of
12 the description from the specification. 'In accordance with'
13 is -- in the patent is used as a general term. It could be
14 used as 'depend on', just like Your Honor has found.

15 So with that, with the evidence in the record, we believe
16 Your Honor has gotten this one correct.

17 THE COURT: The claim language in claim 1 that talks
18 about the latency parameter refers to the path -- data path
19 being enabled for a first time period in accordance with the
20 latency parameter. So is your understanding of the plain
21 meaning of that that the latency parameter determines when it
22 starts, but the claim does not dictate when that enablement of
23 the path ends?

24 DOCTOR ALBERT: Yes, Your Honor, that would be
25 sufficient. And that's -- again, that's exactly what the

1 Patent Office just found in its institution decision regarding
2 these claims.

3 THE COURT: All right.

4 DOCTOR ALBERT: And I can put that language up, Your
5 Honor. "On this record we are sufficiently persuaded by
6 Petitioner's argument that enabling the data path for a time
7 period that starts based on the latency parameter. The patent
8 owner does not sufficiently address whether claim language
9 require latency to relate to the duration of the time periods
10 during which the data is driven rather than the start of the
11 time period."

12 THE COURT: Thank you.

13 MR. SHEASBY: And I'll just make the point that the
14 duration thing is obviously -- the use of the word
15 'duration' is obviously inartful, but I think if you look at
16 the claim language, the latency parameter is controlling the
17 first time period and that first time period is the beginning
18 -- includes the beginning and end of the period.

19 So I think from the claim language itself, it's required
20 that the latency parameter control both the first and -- the
21 beginning and the end. And I'll read that into the record.
22 "A latency parameter to actively drive the respective
23 byte-wise section of the end bit wide write data associated
24 with the memory operation from the first side to the second
25 side during the first time period." From the first side to

1 the second side, from the beginning, the moment of the
2 beginning to the moment at the end, Your Honor. Thank you.

3 THE COURT: And is it your understanding of latency,
4 as used here, that it's talking about something that's
5 inherent in the system; some number of clock cycles that is
6 programmed in?

7 MR. SHEASBY: Yes. So it's not inherent in the
8 system. You have to program it in. Or it's based on -- I
9 think the tristate buffer is what actually does it, which
10 actually delays it so that you get -- you're delaying both the
11 start and the end so that you're not having a collision with
12 -- in figure 6 it's depicting it in one cycle, but there's no
13 magic to it being in just one cycle. The write process could
14 take two cycles, for example, and when it took two cycles
15 you'd want to make sure that the alternative tristate buffer
16 didn't start until the end; not just that it didn't start
17 after the beginning.

18 THE COURT: All right.

19 MR. SHEASBY: That's why it says from the moment --
20 this is not -- that's right. This is not active. The
21 language they put up 15:61 through 66 says it--"from the
22 moment the memory controller informs the memory module to
23 begin the process until the moment the process is completed."
24 That's the whole point--the latency controls that entire
25 period.

1 THE COURT: All right. Thank you.

2 DOCTOR ALBERT: Just one final point here.

3 It seems like Netlist is now arguing for an express
4 definition of 'latency parameter' from the specification, but
5 I'll point out that the language that they're pointing to is
6 not latency parameter generally; it's a specific type of
7 latency, column address strobe latency, which is a different
8 term. That is a -- that's different language, different term.
9 'Latency' can be backed out from here. It is a delay time.

10 THE COURT: So do you contend that when the claim
11 refers to 'latency parameter', it's not referring to the
12 'column address strobe latency' that's described in the
13 specification?

14 DOCTOR ALBERT: This is one example of 'latency',
15 and the examples of -- the example that has been chosen here
16 for 'latency' is a particular type of latency--'column address
17 strobe'.

18 Now, Netlist has offered other evidence about what
19 'latency' means that is different that's not dependent on this
20 'column address strobe latency', but to read this specific
21 example of 'latency', a term that is known, into this
22 construction, we don't believe that's proper. But the general
23 idea of 'latency' is known. We believe that plain meaning
24 controls. We also see that Your Honor's construction is
25 consistent with that.

1 THE COURT: All right.

2 MR. SHEASBY: And I'll just point out for the
3 record, this is Docket 82, page 29, it's 15:61 through 16:6,
4 that Samsung in briefing used to describe the meaning of
5 'latency', and that's the CAS latency passage that is up on
6 the screen right now. So I believe there has been some drift
7 between what was represented on papers and what was just
8 represented now.

9 Thank you, Your Honor.

10 THE COURT: All right. Thank you.

11 Well, I take it there are no further arguments on these
12 terms. Is that right?

13 MR. McKEON: Nothing from Samsung, Your Honor.
14 Thank you.

15 THE COURT: All right.

16 MR. SHEASBY: Nothing from the Plaintiff, Your
17 Honor. Thank you for your time today.

18 THE COURT: All right. The arguments have been
19 helpful, and I will further consider them and try to get out a
20 claim construction order promptly.

21 So with that, thank you. And we're adjourned.

22 (End of hearing.)

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I HEREBY CERTIFY THAT THE FOREGOING IS A
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I FURTHER CERTIFY THAT THE TRANSCRIPT FEES
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S/Shawn McRoberts 11/07/2022

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Concordance

< Dates >

11/07/2022 76:9.
NOVEMBER 4, 2022 1:13.
 "one 50:16.
 '339 44:6, 44:25, 46:8, 49:4, 56:6,
 57:22.
 '506 36:22.
 '918 10:18, 23:14, 23:25.
 'before 40:3.
 'one 39:2, 39:17, 39:18.
 --something 66:20.
 ...have 38:7.
 .
 .
 < 1 > .
 1 12:8, 27:19, 44:20, 62:25,
 71:17.
 1.8 6:19, 10:22, 11:2, 11:14, 24:2,
 24:12, 27:4.
 10 48:17, 59:24.
 100 1:44, 2:48.
 1000 2:21.
 1023 53:25, 54:1, 54:3.
 104 2:14.
 1080 14:24, 15:7, 19:9.
 1089 53:25, 54:11.
 110 24:8.
 1102 10:23.
 1110 9:19.
 1112 9:19.
 1122 11:14.
 1122--is 24:12.
 11:35 48:24.
 11:4 48:18.
 12 14:21, 14:22, 14:24, 14:25,
 15:3, 15:5, 15:7, 15:8, 15:11,
 15:15, 18:25, 19:1, 19:20,
 20:5.
 12860 2:28.
 13 18:25.
 14 18:25, 42:20, 43:16, 59:6.
 15 24:25, 41:1, 41:2, 42:1, 42:20,
 43:12, 43:16, 65:10, 68:23,
 69:15.
 15--very 43:14.
 15:33 49:1.
 15:61 73:21, 75:3.
 16 5:13, 5:20, 11:7, 15:1, 15:12,
 15:16, 15:17, 16:15, 17:10,
 18:14, 18:15, 18:21, 18:22,

19:23, 19:25, 20:1, 20:2, 20:5,
 23:2, 64:25.
 16:38 52:6.
 16:6 75:3.
 1717 2:36.
 17:30 49:4.
 18 10:18, 23:25, 36:7, 60:15.
 1800 2:5.
 1810 36:8.
 1820 36:8.
 1820--receiving 36:10.
 1830 36:12.
 1860 36:14.
 1870 36:15.
 1880 36:16.
 19 36:22.
 .
 .
 < 2 > .
 2 1:5, 3:3, 37:18, 38:1.
 2.5 6:5, 12:8.
 200 62:12.
 20024 2:22.
 202 2:23.
 203-7096 2:8.
 206/208 60:1.
 206A 33:25.
 21-CV-463-JRG 1:5.
 212 59:1.
 214 2:38.
 220 58:25.
 221-463 3:3.
 23 23:13.
 250 59:1.
 26 19:7, 19:8, 19:19.
 29 5:20, 6:5, 6:25, 10:18, 23:14,
 23:25, 27:2, 75:3.
 2A 58:17.
 .
 .
 < 3 > .
 3 38:1, 51:4, 51:5, 51:6, 51:8,
 51:25.
 30 19:21, 24:25.
 300 2:14.
 303 2:42.
 310 2:8.
 33 6:25, 27:2.
 339 48:14.
 339--excuse 48:17.

35 19:7, 19:8.
 38 49:1.
 39 18:21.
 3A 47:19, 51:13, 58:4.
 .
 .
 < 4 > .
 4 36:22, 38:1, 51:24.
 400 2:28.
 402 58:1.
 41 18:22, 40:22, 48:15.
 412 45:18.
 416 47:7, 50:17, 58:5, 58:7,
 59:9.
 420 47:4, 59:8, 59:11.
 430 57:1.
 44 48:24, 49:4, 58:18.
 45 52:7, 58:20.
 452 50:19, 58:4, 58:5.
 46 5:21.
 48 58:20.
 .
 .
 < 5 > .
 5 38:1, 46:6, 46:9, 46:10, 46:18,
 55:13, 55:16, 58:18, 58:19,
 58:23, 60:14, 60:16, 63:23,
 64:25.
 50 64:24.
 5000 2:36.
 502 57:1.
 504 46:22.
 506--so 46:23.
 508--i've 48:6.
 53 48:15.
 56 24:23.
 57 24:20.
 59 58:23, 59:6.
 .
 .
 .
 < 6 > .
 6 70:13, 70:15, 70:17, 73:12.
 60 24:2, 24:13, 64:24.
 601 70:18.
 602 70:18.
 603 70:18.
 61 68:23, 69:15.
 64 10:18, 24:1, 27:2, 48:17,
 58:18.
 65 68:24, 69:15.

Concordance

66 11:24, 73:21 .
 678-5070 2:30 .
 .
 .
 < 7 > .
 7 5:11 .
 72 18:5 .
 747-5070 2:38 .
 75201 2:37 .
 75670 1:45, 2:15, 2:43, 2:49 .
 783-5070 2:23 .

.
 .
 < 8 > .
 8 48:15 .
 80 27:15 .
 81 28:9 .
 82 75:3 .
 858 2:30 .

.
 .
 < 9 > .
 9 6:11, 18:21, 36:22 .
 900 2:6 .
 90067-4276 2:7 .
 903 1:46, 2:16, 2:44, 2:50 .
 92130 2:29 .
 923-7464 2:50 .
 923-8546 1:46 .
 923-9000 2:16 .
 934-8450 2:44 .
 9:00 1:14 .

DATE _____ 76:10 .

.
 .
 < A > .
 A. 47:5 .
 A.M. 1:14 .
 able 24:16, 26:2, 57:5, 61:21 .
 ABOVE-ENTITLED 76:3 .
 absolutely 8:19, 10:17 .
 abstract 62:25 .
 access 54:24, 69:21 .
 accessed 47:23, 47:24 .
 accomplish 45:1 .
 accordance 50:17, 66:9, 67:16,
 67:21, 67:22, 71:2, 71:4, 71:6,
 71:8, 71:9, 71:12, 71:19 .
 according 36:13, 49:11, 49:12 .

accused 23:3 .
 achieved 45:21 .
 acknowledge 25:1 .
 acknowledges 67:11 .
 across 7:6, 12:7 .
 activated 47:16, 47:20, 47:21 .
 activating 44:12, 55:9 .
 active 73:20 .
 actively 44:21, 46:22, 72:22 .
 actual 13:25, 35:15, 55:14 .
 actually 6:13, 7:6, 9:22, 13:16,
 15:6, 15:11, 18:20, 23:15,
 36:3, 37:7, 39:1, 41:2, 50:7,
 58:14, 58:23, 59:22, 59:25,
 64:21, 71:9, 73:9, 73:10 .
 added 42:25, 43:6, 43:7 .
 added. 38:9 .
 additional 19:12, 34:11, 37:10,
 57:12, 61:7 .
 address 28:13, 30:21, 31:9, 38:7,
 41:4, 42:13, 42:15, 45:11,
 46:16, 72:8, 74:7, 74:12,
 74:16, 74:20 .
 addressed 69:17 .
 adjourned 75:21 .
 adjust 23:17 .
 admissions 35:11 .
 Admittedly 65:22 .
 adopted 5:2 .
 adoption 34:23 .
 agnostic 16:13 .
 ago 51:6 .
 agree 21:16, 32:1, 67:17, 68:16,
 69:19, 70:24 .
 agreed 39:13, 39:16 .
 agreeing 22:18 .
 agreement 39:1, 39:24, 67:17 .
 agrees 64:22 .
 ahead 10:13, 27:13, 57:10 .
 al 1:12 .
 Alexsam 21:18, 21:24, 23:1 .
 Alexsam/cigna 21:7 .
 alignment 36:23 .
 ALJ 54:12, 54:14 .
 allegedly 22:2 .
 allied 68:25 .
 allow 34:24, 34:25, 38:18, 47:3,
 54:7 .
 allowance 37:21, 37:22 .
 allowed 37:18 .

allowed--claim 37:18 .
 allowing 48:13, 48:16 .
 allows 49:19, 59:4 .
 already 20:12, 39:13, 51:5 .
 alter 4:5, 61:23 .
 altered 39:25 .
 alternative 11:15, 11:16, 47:13,
 50:7, 53:20, 73:15 .
 alternatively 9:19 .
 ambiguity 40:11, 40:16, 41:10 .
 amend 4:4, 42:18 .
 amended 38:7, 41:2, 41:7, 42:1,
 42:13, 42:24, 43:6 .
 amending 42:9 .
 amendment 38:3, 38:16, 38:19 .
 amount 7:1, 23:15, 24:17, 35:24,
 36:2, 36:11, 36:16, 36:20,
 41:6 .
 amplitudes 9:5, 22:19, 25:2 .
 amps 24:2, 24:13, 24:14 .
 analogy 24:6 .
 analyze 34:5 .
 Andrews 12:25 .
 ANGELES 2:4, 2:7 .
 Annita 2:10, 3:8 .
 answer 40:3 .
 answering 56:19 .
 antecedent 27:17, 27:20, 27:23,
 28:3, 30:25, 31:2, 32:3 .
 anticipated 19:5 .
 anyway 33:2, 56:22 .
 apologize 44:17 .
 apparatus 29:1 .
 appear 5:6, 19:22 .
 appearances 3:5 .
 appearing 27:23 .
 appears 5:11, 13:19, 43:2,
 56:21 .
 applicable 15:18 .
 application 64:5 .
 applies 22:7, 30:4 .
 apply 41:9, 42:21 .
 applying 65:7 .
 appreciate 5:3, 43:4, 43:15,
 43:23, 64:14, 64:20, 65:14 .
 appropriate 3:25, 5:18, 7:1,
 9:23 .
 argue 5:3, 27:7, 27:8, 27:12,
 34:24, 64:11, 67:22 .
 argued 57:21, 60:12 .

Concordance

argues 53:22 .	36:10, 36:16, 37:11, 40:23,	buffer. 41:7 .
arguing 53:25, 64:19, 74:3 .	41:6, 65:19, 67:25, 68:8, 72:7,	buffers 44:25, 47:7, 52:9, 52:11,
argument 7:21, 8:13, 9:9, 10:6,	73:8 .	52:17, 52:21, 53:2, 53:7,
10:15, 12:19, 14:20, 14:24,	basic 10:15, 11:3, 25:4 .	56:25, 57:2, 63:23 .
23:7, 25:23, 26:1, 26:24,	basis 4:8, 27:17, 27:20, 27:23,	built 44:16, 54:17, 55:2, 63:9 .
30:12, 32:1, 32:25, 33:13,	28:3, 33:18, 41:19, 46:1 .	bunch 28:16 .
33:19, 34:11, 43:13, 43:15,	becomes 47:17 .	burst 11:10 .
43:21, 59:25, 61:15, 64:13,	before--i'll 39:14 .	Burton 2:32, 3:15 .
67:24, 72:6 .	begin 73:23 .	bus 49:20 .
arguments 4:3, 4:6, 4:8, 42:19,	beginning 65:16, 65:18, 69:16,	byproduct 62:16 .
75:11, 75:18 .	72:17, 72:18, 72:21, 73:1,	byte-wise 72:23 .
around 15:13 .	73:2, 73:17 .	.
array 33:17, 33:25 .	behalf 3:14 .	.
art 5:23, 8:2, 8:9, 8:23, 10:3,	behind 46:2 .	< C > .
11:6, 20:4, 21:3, 49:14, 49:15,	believe 30:15, 34:22, 35:10,	C. 47:12, 58:6 .
49:16, 55:11, 58:18, 59:12,	40:16, 50:13, 71:15, 74:22,	C/A 35:8, 35:16, 35:21, 39:6,
60:19 .	74:23, 75:6 .	39:12 .
art--'dual 5:14 .	believes 41:15 .	CA 2:7, 2:29 .
articulate 11:20 .	Bell 8:18 .	call 47:12, 59:17, 66:24 .
aspect 24:4 .	below 51:3 .	called 45:5, 60:20 .
asserted 62:17 .	best 22:13, 22:21 .	CAMINO 2:28 .
associated 72:23 .	big 38:6, 50:20, 62:5 .	capability 7:21, 12:10, 25:25 .
assume 42:25 .	bit 23:16, 54:12, 66:6, 72:23 .	capable 14:20 .
assumption 12:11 .	blacked 51:25 .	caption 18:21 .
astray 4:4 .	board 13:23, 13:25, 15:21, 17:4,	CAS 75:5 .
Atlantic 8:18 .	17:6, 17:14, 17:16, 28:10,	cases 8:18, 53:24, 55:6 .
attempt 52:14, 52:16, 52:18 .	28:19, 29:3, 29:20, 29:21,	CAUSE 1:5, 53:13, 53:23 .
attention 35:19, 43:24, 64:20 .	29:24, 30:19, 31:8, 32:6, 32:9,	certain 22:19, 44:12, 45:21,
AVE. 2:21 .	33:9 .	59:9 .
AVENUE 2:5, 2:42 .	body 27:18, 27:24, 30:8, 32:21 .	Certainly 19:16, 22:23, 25:14,
aware 46:4 .	bolded 50:11, 50:12 .	28:3, 56:9 .
away 15:25, 32:3, 49:21 .	bottom 10:24 .	CERTIFY 76:1, 76:4 .
awesome 64:12 .	Brief 5:9, 21:7, 25:13, 50:10,	change 38:4, 38:6, 38:17, 38:20,
.	50:11, 50:13, 51:19, 52:6,	38:21, 43:7, 43:9, 51:17 .
.	52:15, 52:25, 57:15, 67:22 .	changed 37:23, 37:24, 42:14,
< B > .	brief--they 68:25 .	67:9 .
B. 46:9, 47:1, 47:14, 47:24,	briefing 4:2, 12:23, 62:5, 67:20,	changes 13:11 .
56:16, 64:1 .	68:4, 75:4 .	changing 38:4, 38:17 .
back 9:2, 9:8, 17:10, 28:9, 31:3,	briefs 13:3 .	character 13:11 .
35:19, 37:23, 38:16, 39:5,	bright 56:8 .	characteristic 9:6 .
39:8, 39:14, 40:1, 42:4, 46:15,	bring 7:13, 15:1, 41:17 .	chart 39:17 .
46:18, 49:25, 50:2, 55:12,	brings 17:20 .	Choi 3:17 .
57:11, 58:15, 64:22, 65:8 .	broad 43:18 .	chose 50:3 .
back--'before 38:5 .	broadest 8:6 .	chosen 74:15 .
backed 74:9 .	brother 27:7 .	circuit--this 24:11 .
bag 25:20 .	buffer 35:25, 44:5, 44:8, 46:21,	circuitry 46:11, 46:19, 63:25 .
bank 49:18 .	46:23, 47:5, 47:15, 52:8, 58:6,	circuits 10:20, 25:8, 26:3, 33:24,
banks. 49:22 .	58:7, 63:4, 63:18, 63:24, 73:9,	34:4, 34:7, 36:23, 47:7, 48:19,
barring 68:9 .	73:15 .	50:17 .
based 4:6, 32:19, 35:11, 35:25,	buffer--'to 45:5 .	circuits"--that 45:5 .

Concordance

circumvent 55:10 .	17:15, 17:17 .	consistent 14:5, 21:11, 27:18, 37:13, 49:7, 65:10, 68:7, 69:2, 74:25 .
cite 15:8, 21:7 .	command 41:4 .	consistently 8:11 .
cited 19:20, 70:23 .	commission 54:13, 54:15, 54:25 .	constitutes 41:15 .
claimed 30:7, 30:15, 31:11, 31:12, 31:22, 33:2, 33:8, 49:19 .	common 5:16, 42:19 .	constructions 3:22, 3:23, 4:1, 4:5, 4:13 .
Claims 5:11, 13:14, 16:21, 19:23, 22:22, 23:11, 27:18, 37:17, 37:21, 39:24, 41:8, 42:5, 42:8, 42:13, 42:16, 42:24, 43:5, 43:6, 44:15, 49:9, 49:10, 54:3, 54:14, 62:21, 68:5, 72:2 .	communicate 4:20 .	construe 29:11, 32:13, 37:14, 39:1, 39:5, 40:8 .
clarification 33:6, 34:10, 68:9 .	communication 30:3 .	construed 15:22, 41:21, 62:24, 64:2 .
clarity 15:13, 33:13, 35:11, 35:12, 38:8, 42:13, 42:15, 66:6 .	complete 29:1, 60:11 .	construing 38:11, 40:24, 62:12, 67:15 .
clear 10:24, 14:3, 14:6, 20:22, 22:16, 23:14, 29:2, 29:12, 29:16, 30:13, 30:15, 32:15, 33:20, 40:12, 57:24, 65:19, 68:17, 68:25, 69:4, 69:15 .	completed. 73:23 .	contemplated 19:8, 58:15 .
clear--this 52:14 .	completely 6:22 .	contend 55:21, 56:3, 56:15, 74:10 .
clearly 19:23, 32:4 .	complicated 62:21, 63:1, 64:4 .	context 5:23, 6:6, 8:25, 13:13, 16:2, 16:6, 21:3, 21:13, 21:19, 21:23, 22:11, 22:13, 23:2, 23:3, 26:7, 26:9, 28:14, 28:19, 28:20, 29:9, 32:22, 36:5, 39:23, 51:16 .
clock 73:5 .	COMPLY 76:5 .	continuations 62:19 .
closed 47:16, 47:17 .	component 8:22, 12:12, 14:3, 29:6 .	continuing 62:20, 64:5 .
co-counsel 23:17 .	components 6:16, 6:18, 6:20, 7:19, 9:14, 9:15, 10:16, 15:14, 25:17, 27:3, 31:17, 33:10 .	contrary 49:21 .
CO. 1:11 .	components. 7:1 .	contributing 25:7 .
coined 11:6, 51:9 .	comprising 31:14 .	control 28:13, 28:17, 30:21, 31:9, 35:18, 35:21, 41:5, 44:20, 46:10, 46:18, 48:15, 56:25, 57:4, 57:6, 57:7, 57:9, 63:4, 63:6, 63:13, 63:16, 63:25, 68:21, 68:22, 72:20 .
colleague 3:8 .	concede 8:4 .	controller 10:21, 37:1, 48:17, 49:2, 49:6, 58:25, 59:4, 59:8, 59:10, 64:8, 65:13, 69:20, 73:22 .
collection 64:3 .	concept 44:15, 46:8, 48:10, 49:4, 49:9, 51:5, 51:16, 52:3, 52:4, 54:18, 55:2, 55:3, 63:2 .	controller"--and 45:3 .
collision 73:11 .	concern 31:20 .	controller. 45:7, 45:9, 45:19 .
colloquially 44:7 .	concerned 21:25 .	controlling 49:19, 55:6, 70:2, 70:3, 72:16 .
colored 58:5 .	concluded 34:1 .	controls 57:2, 65:17, 68:22, 69:9, 69:24, 73:24, 74:24 .
column 5:20, 6:5, 6:25, 18:21, 19:7, 19:8, 19:19, 48:17, 58:19, 58:23, 59:6, 59:24, 64:24, 64:25, 65:10, 69:15, 69:17, 69:21, 69:22, 74:7, 74:12, 74:20 .	concoct 61:21 .	conversion 29:6, 29:15, 31:16, 33:9 .
columns 58:18 .	condition 46:25 .	converter 5:8, 5:10, 5:14, 5:15, 5:16, 5:25, 6:20, 6:21, 7:5, 7:10, 7:15, 7:22, 8:3, 8:10, 8:20, 9:4, 10:2, 11:5, 11:20, 12:9 .
Colvin 2:39, 3:15, 34:13, 34:15, 34:19, 34:21 .	conduit 29:8 .	converters 6:13, 7:3, 7:6, 7:9,
combined 7:15 .	CONFERENCE 76:6 .	
comes 6:2, 6:3, 13:15, 13:23, 50:2 .	configurable 44:20, 63:4 .	
comfortable 65:11 .	configuration 14:23, 20:4, 53:21, 58:10, 58:19 .	
coming 5:25, 6:1, 6:5, 6:10, 7:5, 9:11, 9:18, 9:19, 9:20, 9:22, 11:21, 15:20, 16:22, 16:23, 16:25, 17:6, 17:10, 17:12,	configured 7:10, 28:11, 30:20, 59:10 .	
	confusion 33:11, 65:15 .	
	connected 18:20, 47:9, 47:10, 50:19 .	
	connecting 58:5, 58:7 .	
	connection 15:6, 17:4, 17:7, 18:7, 18:9, 19:20, 19:22, 31:23, 32:10 .	
	connections 16:23, 16:24, 16:25, 17:17, 18:12, 28:12, 30:20 .	
	connector 18:19 .	
	connects 47:11 .	
	consider 75:19 .	
	consideration 46:5 .	
	considered 27:25 .	

Concordance

7:12, 9:18, 9:21, 10:1, 11:9, 11:10, 11:11, 13:18, 14:2, 14:12, 14:13, 14:17, 15:21, 16:1, 16:9, 18:11, 19:24, 26:10.	dealing 24:19.	70:16, 70:18.
core 12:4, 44:4, 46:8.	debate 22:8, 22:24.	describing 15:7, 53:19, 55:15.
corporate 3:9, 3:16.	decide 21:14, 21:19, 21:22, 23:1, 23:4.	description 5:20, 8:22, 8:24, 14:4, 18:21, 19:18, 19:22, 20:1, 20:2, 20:5, 25:16, 37:14, 48:3, 49:8, 52:5, 57:24, 67:8, 71:12.
CORRECT 29:14, 38:8, 66:16, 71:16, 76:2.	decides 54:12.	descriptions 6:24.
correctly 67:3, 71:4.	decision 55:2, 55:3, 68:4, 72:1.	designed 4:1, 4:14, 4:17.
corresponding 5:20, 35:8, 35:17, 35:21, 36:4, 38:3, 39:7, 39:12, 41:4.	decisions 21:9.	desirably 45:20.
corresponding'--again 39:6.	default 60:1.	despite 32:20.
correspondingly 63:25.	Defendant 20:17.	detail 6:15.
corresponds 20:6.	DEFENDANTS 1:14, 2:19.	deter 3:23.
Counsel 3:5, 3:21, 4:9, 4:10, 4:21, 14:20, 15:5, 18:9, 18:14, 19:20, 20:2, 33:12, 40:23, 57:21, 57:23, 58:16, 59:20, 60:6, 67:8, 68:10, 68:14.	define 8:24, 28:25, 34:7.	determine 36:23.
couple 28:12, 28:22, 30:20, 45:2, 45:6, 45:12, 61:13.	defined 7:2, 8:11, 8:15, 8:19, 8:20, 8:21, 10:3, 65:9, 71:7.	determined 36:17, 38:21, 40:12, 40:13.
coupled 29:6, 50:18.	defines 5:21, 28:21.	determines 71:21.
coupling 28:20, 29:4, 29:22, 30:22, 30:23, 31:9, 46:2.	definitely 8:21.	determining 35:24, 36:2, 36:20, 37:11, 41:5.
course 6:1, 11:1, 13:2, 13:6, 13:17, 13:22, 14:2, 14:18, 15:17, 24:3, 26:9, 38:11, 38:16.	definition 67:9, 70:23, 74:4.	device 6:7, 28:5, 29:12, 30:14, 30:15, 30:17, 31:22, 31:24, 33:2, 35:18, 35:21, 41:5, 45:8, 46:3, 46:16, 49:2, 50:25, 59:7, 60:22.
Courtroom 64:17.	delay 36:12, 36:13, 36:15, 37:11, 66:20, 66:23, 67:1, 67:4, 67:12, 69:19, 70:22, 70:23, 70:24, 74:9.	device--fpga 6:9.
cover 49:10.	delay--they 66:25.	devices 44:9, 44:12, 44:13, 45:2, 45:6, 45:12, 45:15, 45:18, 47:9, 47:10, 47:23, 49:6, 49:20, 50:19, 53:9, 54:23, 54:25, 59:1.
cranking 14:9.	delay--you 67:1.	devices. 49:1.
crash 53:14.	delaying 73:10.	dictate 71:22.
create 56:9, 65:6, 65:15.	delays 73:10.	dictionary 70:23.
CRR 1:43, 2:47, 76:11.	deleted 51:23.	die 33:17.
crux 13:5, 70:24, 70:25.	deliver 11:12.	DIEGO 2:27, 2:29.
cycle 12:13, 73:12, 73:13.	delivering 10:20.	dies 33:25.
cycles 73:5, 73:14.	DEM 28:15, 28:18.	differed 67:10.
.	demand 10:16, 12:11.	difference 9:15, 32:12.
.	depend 39:22, 71:14.	differently 61:25, 62:2.
< D >.	dependent 5:11, 7:13, 23:14, 71:5, 74:19.	differing 25:6.
D. 50:24, 58:8.	depending 66:13.	difficulty 16:16, 65:7.
DALLAS 2:35, 2:37.	depends 65:5, 66:11, 67:14, 70:10.	direct 46:11, 64:15.
data. 46:12.	depicted 5:13.	directed 19:23, 47:18.
database 21:8, 21:9, 22:1.	depicting 73:12.	directly 14:16, 15:21, 16:8, 17:10, 65:12.
databases 22:2.	depiction 5:12.	disabled 46:24.
DC 2:20.	Deputy 64:18.	disabling 55:22, 56:4, 56:16, 58:11, 59:18, 63:12, 63:25.
deactivating 44:13.	derive 7:23.	disagrees 33:12.
deal 48:5, 50:20.	describe 8:1, 8:3, 24:18, 48:20, 51:23, 52:2, 53:1, 53:3, 53:16, 56:1, 67:12, 70:12, 70:19, 71:10, 75:4.	disclaimed 34:8.
	described 7:17, 8:4, 19:1, 19:6, 44:5, 45:20, 46:7, 52:15, 52:19, 53:18, 58:18, 58:20, 63:16, 67:5, 74:12.	
	describes 6:14, 24:15, 52:3, 53:4, 55:10, 56:18, 63:19,	

Concordance

disclaimer 33:19, 34:2.	44:15, 44:23, 55:21, 56:3,	26:4, 37:3, 37:5, 50:7, 50:8,
disclose 50:7, 53:22.	56:10, 56:15, 57:5, 62:23,	50:17, 51:9, 51:10, 51:18,
disclose"--this 49:17.	62:24, 62:25, 63:20, 72:22.	51:21, 52:7, 52:23, 53:20,
disclosed 10:4, 27:4, 56:5, 59:5,	driven 72:10.	57:22, 59:9, 60:17, 61:22,
59:6, 62:3.	drives 44:21, 46:22.	63:14.
discloses 25:16, 33:24.	driving 49:11, 50:1, 55:8, 63:17,	embodiments 45:21, 45:23,
disclosure 8:1, 9:10, 13:13, 14:6,	63:19.	52:12, 53:11, 57:25.
14:18, 15:2, 19:25, 25:21,	dual 5:8, 5:10, 5:16, 5:25, 6:21,	emphasis 62:5.
26:7, 26:11, 26:14, 26:15,	7:5, 7:10, 7:15, 8:3, 8:9, 8:20,	emphasize 5:9, 19:18.
26:20, 50:18, 56:10, 56:11,	10:2, 11:5, 11:10, 11:20, 12:9,	employed 58:1.
56:12, 56:20.	56:1.	enable 46:19, 46:20, 47:14, 52:9,
discuss 50:15.	duck 56:24.	63:23.
discusses 55:8, 66:18, 66:19.	duration 66:2, 66:13, 66:15,	Enabled 45:2, 45:6, 46:22, 63:11,
discussing 35:16, 48:18, 48:24,	66:24, 67:1, 67:2, 70:10, 72:9,	63:12, 71:19.
56:11.	72:14, 72:15.	enablement 71:22.
discussion 4:17, 35:24.	during 35:9, 35:12, 36:17, 36:23,	enabling 49:5, 49:10, 63:12,
displayed 16:15.	36:24, 37:25, 38:5, 39:10,	63:24, 72:6.
dispute 13:2, 13:5, 21:13, 21:16,	39:15, 40:4, 40:13, 40:25,	End 27:20, 27:21, 29:13, 30:14,
44:4, 45:23, 50:6, 64:22,	41:12, 42:2, 42:21, 49:14,	65:8, 65:16, 65:18, 66:4,
65:17, 65:24, 67:19, 71:1.	49:17, 58:24, 59:8, 59:20,	69:10, 69:16, 72:18, 72:21,
disputed 3:22.	60:3, 60:8, 60:12, 65:7, 72:10,	72:23, 73:2, 73:11, 73:16,
disputes 6:1.	72:25.	75:22.
disputing 5:15.	.	ends 15:25, 50:23, 50:24, 68:23,
distinct 6:2, 6:9, 20:21, 20:23,	.	69:1, 69:13, 69:25, 70:3,
20:25, 21:1, 21:3, 21:4, 21:5,	< E > .	71:23.
21:8, 21:11, 21:15, 21:16,	E. 1:44, 2:14, 2:48, 27:8.	engineering 24:3, 25:4.
21:20, 22:3, 22:8, 22:10,	earlier 3:20, 35:20, 36:17, 51:7,	Engineers 56:8.
22:17, 22:18, 23:3, 23:5.	70:14.	enough 49:7.
distinctly 66:17.	EASTERN 1:2.	entire 64:3, 69:24, 73:24.
distinguished 49:14.	edge 16:23, 16:25, 17:4, 17:7,	equally 22:7.
distributed 3:21.	17:11, 17:12, 17:17, 18:9,	equated 40:15.
DISTRICT 1:1, 1:2.	18:12, 28:12, 28:16, 30:20.	equivalence 39:22, 40:2, 40:15,
DIVISION 1:3.	effect 11:3.	42:4, 42:5, 43:10.
Docket 3:4, 75:3.	efficient 4:11, 20:13.	equivalent 38:22, 39:9, 39:11,
documents 25:19, 26:19.	either 3:24, 31:1, 38:12, 41:19,	40:5, 42:6.
doing 12:10, 14:9, 17:5, 29:21,	46:11, 56:12.	erased 51:20, 51:22.
29:22, 29:24, 30:9, 31:8,	EL 2:28.	errors 38:8.
45:7.	elaborate 62:14.	esoteric 25:3.
done 13:16, 20:6, 51:22, 61:24,	elapses 66:20, 68:15, 69:19.	et 1:12, 64:24.
62:2.	electrical 24:3, 25:4.	event 66:20.
down 10:23, 14:14, 18:1, 33:14,	electrically 45:2, 45:5, 45:14,	events 12:14.
47:14, 51:3, 68:11, 68:14.	55:23.	everyone 64:22.
down-tick 9:23.	ELECTRONICS 1:11.	everything 29:5.
downscale 9:21.	element 13:24, 25:4.	evidence 11:5, 25:18, 71:15,
DRAM 10:21, 10:25, 11:1, 27:3,	elements 12:5, 13:22, 14:8, 33:8,	74:18.
33:24, 34:4, 34:7.	48:4, 54:19.	exact 54:4, 65:14.
Drams 11:15.	Ellsberry 49:16, 49:21, 60:1.	exactly 19:11, 46:7, 55:18,
draw 22:1.	elmo 64:17.	71:25.
drift 75:6.	embodiment 6:6, 8:2, 11:8,	examination 38:18.
drive 6:15, 9:13, 44:1, 44:5,	11:14, 11:16, 16:15, 16:17,	example 10:21, 11:13, 12:6,

Concordance

18:25, 19:6, 23:22, 23:25,
24:21, 27:19, 29:5, 29:14,
37:1, 37:18, 46:19, 58:4, 59:6,
60:20, 63:1, 73:14, 74:14,
74:15, 74:21 .
examples 36:22, 37:10, 48:14,
74:15 .
Except 43:17 .
excluded 34:4, 66:15 .
Exhibit 24:25 .
experts 4:18, 21:21, 34:5, 34:6 .
explain 11:23, 37:8 .
explanation 6:4 .
express 74:3 .
expressed 44:12, 67:9 .
expressly 24:15 .
extent 22:19, 39:23, 40:17 .
extrinsic 25:18 .
.
.
< F > .
F. 27:10 .
faces 62:11 .
fact 6:11, 15:11, 20:1, 22:2,
24:11, 30:8, 32:19, 32:20,
62:11, 65:11 .
facts 55:7 .
fail 42:25 .
fails 57:23 .
Fair 43:3 .
fall 17:3 .
falling 17:15 .
falls 62:1 .
familiar 37:13 .
family 62:18 .
far 16:2 .
fear 15:22, 16:4 .
fed 27:4 .
FEDERAL 23:11, 76:12 .
feed 24:18, 25:7 .
feel 16:7, 66:2 .
FEES 76:4 .
felt 21:13 .
few 5:7, 51:6 .
field 67:7, 67:10, 67:11 .
figures 51:17, 51:20, 52:2, 58:4,
61:23, 71:11 .
final 7:8, 74:2 .
find 42:16, 43:12 .
finding 16:16, 54:16 .

finer 56:23 .
fingers 28:16, 28:17 .
finished 68:4 .
first 4:21, 5:7, 7:9, 9:4, 20:19,
21:8, 22:4, 22:10, 27:7, 27:21,
28:10, 29:13, 30:14, 30:16,
31:12, 31:21, 35:7, 35:24,
35:25, 41:6, 41:7, 44:21, 45:1,
64:13, 71:19, 72:17, 72:20,
72:24, 72:25 .
FISH 2:19, 2:26, 2:34 .
fit 28:11 .
five 9:22 .
flash 10:21, 10:25, 11:15, 27:3 .
flashes 11:1 .
fly 37:9 .
focus 4:3 .
focusing 57:22 .
follow 63:7 .
following 21:18, 22:13, 24:7 .
follows 66:10 .
FOREGOING 76:1 .
forgot 41:1 .
fork 44:7, 44:10, 44:24, 50:22,
51:13, 51:22, 51:23, 51:25,
52:1, 53:21, 54:14, 54:15,
55:1, 55:15, 58:9, 59:17,
61:16, 61:20, 61:22, 62:22,
63:3, 63:20 .
fork-in-the-road 51:10, 52:2,
52:4, 54:4, 55:3 .
FORMAT 76:5 .
found 43:16, 54:3, 54:5, 54:14,
62:6, 62:18, 70:22, 71:14,
72:1 .
foundation 9:9 .
four 24:8, 57:24, 57:25, 58:13,
61:4, 61:5 .
fourth 20:20, 22:5, 23:13 .
FPGA 11:16, 12:1, 12:4, 12:5,
12:14, 23:23, 26:12, 26:13 .
Fpga--and 11:25 .
Fpgas 12:7, 26:15 .
FRANCIS 2:31 .
Frank 3:15, 35:5 .
from--i'll 38:4 .
front 62:1 .
full 57:22 .
function 45:14 .
fundamentally 22:9 .

funny 25:3 .
.
.
< G > .
gave 15:15, 23:22, 24:6 .
general 71:13, 74:22 .
generally 74:6 .
generated 13:4, 14:15, 15:15,
15:20, 15:24, 16:9, 17:16,
19:4, 36:12 .
generating 13:25, 14:1, 16:25,
36:12 .
gets 54:13 .
getting 37:17, 39:4, 66:22 .
GILLAM 2:41 .
give 23:22, 34:3 .
given 12:12, 16:2, 65:4, 65:25 .
gives 5:22, 17:8, 32:24 .
glad 62:15 .
goals 60:25 .
gold 28:16, 28:17 .
gotten 71:16 .
govern 4:18 .
grammatical 38:8 .
grayed 58:7 .
great 16:19, 24:10 .
green 15:19 .
group 4:10, 44:14, 48:21, 51:11,
63:8, 63:21 .
grouped 54:24 .
groups 44:9, 44:12, 45:12,
45:13 .
guess 16:11, 22:6, 22:19, 25:19,
25:22, 31:3, 31:19, 32:1,
32:23 .
guidance 5:19, 34:3 .
guides 32:4, 64:24 .
guys 35:2 .
.
.
< H > .
half 35:23 .
hand 22:12, 30:23 .
handle 4:18 .
hang 16:20, 18:14 .
happen 36:3, 41:11, 41:12,
53:11 .
happens 41:12 .
happy 4:9 .
hat 18:15 .

Concordance

hear 4:8, 18:1, 18:2, 20:16,
 57:11 .
HEARING 1:22, 3:3, 4:6, 30:12,
 31:19, 61:17 .
hearing. 75:22 .
height 23:20 .
held 21:10 .
help 23:18 .
helpful 66:6, 75:19 .
helping 37:14 .
here--before 37:20 .
HEREBY 76:1 .
herein 8:21 .
high 46:24 .
higher 14:9 .
highest 22:21 .
highlighted 14:7, 35:14, 45:3,
 45:16, 46:10, 50:14, 65:1 .
highlighted--and 48:7 .
highlighting 47:8, 51:7 .
history 33:19, 33:23, 36:6, 37:7,
 37:16, 39:8, 40:15, 40:23,
 41:20, 55:9, 62:4 .
history--switching 62:7 .
Hobbs 3:10 .
hold 30:22 .
home 17:20 .
Honor--i 56:24 .
HONORABLE 1:24 .
hooks 16:20 .
hope 4:7 .
host 28:14, 28:18, 29:4, 29:8,
 30:24, 30:25, 31:6, 31:24,
 32:10 .
HOUSTON 1:44, 2:14, 2:48 .
 .
 .
< I > .
idea 44:11, 44:19, 45:10, 45:19,
 47:6, 47:22, 47:24, 48:21,
 49:8, 50:21, 53:14, 54:18,
 55:4, 61:24, 62:22, 74:23 .
identified 30:14 .
illustrate 52:18 .
illustrated 18:25, 47:19 .
illustrates 49:9 .
illustrating 18:22, 18:23 .
illustration 36:8, 46:6, 47:2,
 51:4, 51:13 .
impact 32:16 .

impacts 32:15 .
impedance 46:24 .
implement 47:24, 50:4, 53:15,
 55:2 .
implementation 54:4 .
implemented 61:16, 61:18 .
implements 61:20 .
implication 8:19, 8:24, 67:23 .
implicit 9:5 .
imply 71:7 .
important 15:17, 46:5, 58:2 .
in. 9:20, 73:8 .
inartful 72:15 .
INC. 1:5 .
include 28:12, 31:15, 44:24,
 67:1 .
includes 43:18, 43:19, 66:3,
 72:18 .
including 57:25, 63:4, 71:11 .
inconsistent 10:17 .
increase 43:9 .
independent 7:12, 10:25, 11:17,
 24:16, 27:5, 52:23, 53:1, 53:3,
 53:12, 53:16 .
independently 11:2, 52:11,
 52:22, 53:8, 53:17 .
indicate 29:23 .
indulgence 64:20 .
informs 69:20, 73:22 .
infringe 62:19 .
infringement 54:15, 54:22,
 65:7 .
inherent 70:1, 73:5, 73:7 .
inherently 69:11 .
inhibiting 48:14 .
initial 4:2, 16:11 .
input 13:1, 13:6, 13:9, 13:10,
 13:11, 13:15, 13:17, 13:23,
 14:1, 14:8, 16:22, 16:24, 17:1,
 17:2, 17:4, 17:5, 17:11, 17:14,
 18:8, 18:10, 18:11, 35:7,
 35:16, 35:21, 36:3, 39:6,
 39:12, 41:3 .
inputs 14:12, 14:17, 48:8 .
insight 43:4, 43:14 .
instance 7:3, 7:4, 27:7 .
Instead 47:19, 61:3 .
instituting 68:5 .
institution 68:4, 72:1 .
instructive 70:15 .

intend 34:3, 34:7 .
intended 4:20, 28:4, 28:6, 28:21,
 29:19, 30:10, 32:19, 60:23 .
intention 68:19 .
interface 28:11, 28:15, 28:19,
 28:22, 29:3, 29:8 .
interface. 49:20 .
interpretation 41:18, 56:20 .
interval 36:13, 36:24, 40:11,
 40:13 .
invention 49:19, 58:15, 58:16,
 59:3, 59:4, 61:1, 61:16,
 61:20 .
inventors 19:5, 48:2, 58:20 .
investigation 53:25, 54:1,
 54:11 .
invite 21:14, 21:17, 22:24 .
involve 9:4 .
involved 22:3, 54:1, 54:2 .
IP 30:1 .
IPR 68:3 .
IRELL 2:3 .
irrelevant 32:3 .
isolate 45:11, 45:12, 45:15,
 45:18, 54:6 .
isolate"--excuse 45:17 .
isolation 6:7, 46:2 .
issue 20:20, 20:23, 21:7, 21:12,
 21:25, 22:2, 22:4, 25:16, 32:5,
 34:2, 37:22, 40:19, 41:16,
 54:13, 54:14, 67:2, 67:4, 68:3,
 70:25 .
issued 42:20, 43:16, 54:6 .
issues 4:15, 4:17, 38:7, 42:13,
 42:15, 68:18 .
issuing 3:23 .
it--""before 39:14 .
it--"from 73:21 .
it--what 28:19 .
italicized 50:11, 50:13 .
ITC 53:24, 62:6 .
itself 8:5, 8:6, 11:4, 13:4, 17:8,
 17:18, 30:15, 40:2, 41:20,
 67:6, 67:18, 72:19 .
itself--the 12:1 .
 .
 .
< J > .
Jamie 3:10 .
Jason 2:9, 3:8 .

Concordance

<p> Jayson 3:10. Jeff 2:32, 3:15. Jennifer 2:17, 3:6. JESD 25:20. job 5:9. joined 3:14. joint 39:17. JUDGE 1:25. JUDICIAL 64:14, 76:6. jump 34:25. jury 21:14, 21:18, 21:22, 22:13, 23:1, 23:4, 23:6. justified 59:19. . . < K > . keenly 67:3. kept 61:17. key 13:16. kind 44:10, 47:7, 51:18. known 67:7, 67:11, 74:21, 74:23. knows 13:2. . . < L > . labeled 46:21. language--"before 41:3. large 44:16. last 64:19. latency"--that 69:18. latency"--column 74:16. later 36:14. law 20:22, 21:11, 27:22, 37:13. least 35:25, 41:6, 65:6, 66:11, 67:14, 70:10. leave 23:5. Lee 3:18. left 22:13, 47:8. left--"and 45:17. left--"by 45:4. length 57:21. less 57:25. lesson 10:19. level 9:23, 14:10. life 32:24. limitation 16:12, 17:11, 26:5, 27:21, 28:10, 29:13, 30:14, 30:16, 31:12, 31:21, 33:1, 37:4, 41:11, 44:17. </p>	<p> limited 26:18, 40:24, 42:7. limiting 8:1, 8:12, 26:22, 27:17, 28:2, 28:25, 29:11, 30:6, 30:17, 31:20, 32:13, 32:18, 32:22, 33:7. line 5:21, 6:25, 10:23, 19:21, 47:4, 49:2, 50:25, 51:8, 51:9, 51:18, 51:21, 52:12, 52:22, 53:11, 53:13, 53:20, 58:10, 58:11, 59:6, 59:16, 61:21, 68:23. line-drawing 22:8. lines 11:21, 18:21, 19:7, 22:1, 23:22, 27:5, 50:19, 51:1, 53:10, 58:18, 58:20, 58:22, 58:23, 59:1, 62:7, 64:24, 64:25, 69:15. lines--one 58:5. link 70:20. linked 36:1, 36:21, 69:11, 69:12. linking 70:21. litigation 62:17. little 66:6, 70:14. LLP 2:3, 2:41. load 24:4, 24:10, 24:14, 25:7, 48:1, 48:18, 48:20, 50:5, 58:16, 58:21, 58:22, 59:1, 59:7, 59:14, 61:3, 61:4. load. 59:11. loads 45:8, 45:10, 46:3, 46:17, 61:4, 61:5. logic 6:17, 7:16, 8:8, 21:18, 22:7, 22:14, 22:25, 30:4, 44:19, 46:11, 46:19, 63:4, 63:13. long 15:25. longer 62:21. look 5:18, 6:12, 8:8, 11:25, 16:21, 17:20, 18:15, 23:11, 23:25, 24:21, 33:2, 35:14, 36:7, 36:19, 37:7, 44:25, 55:7, 56:24, 58:4, 58:17, 59:24, 64:23, 66:8, 71:9, 72:15. looking 8:4. looks 5:12, 28:3, 28:7. LOS 2:4, 2:7. lot 53:24. lots 10:19, 11:8. lower 45:17. LTD 1:11. . </p>	<p> . . < M > . M. 2:47. Madam 64:17. magic 73:13. MAGISTRATE 1:25. MAIN 2:36, 9:9, 10:5. MAINE 2:21. management 11:9. MANELLA 2:3. marked 46:23. MARKMAN 1:22. MARSHALL 1:3, 1:12, 1:45, 2:13, 2:15, 2:43, 2:49. masking 60:20. materials 38:15. Matt 3:15. MATTER 7:16, 7:17, 37:19, 38:8, 42:25, 43:5, 43:7, 76:3. matters 16:1, 42:2. MATTHEW 2:39. Mckool 2:13. Mcroberts 1:43, 2:47, 76:9, 76:11. me--"electrically 45:17. me--column 48:17. me--in 46:8. me--that 54:17. mean 13:2, 13:8, 15:3, 15:12, 21:20, 22:6, 22:7, 26:7, 29:19, 31:1, 32:1, 32:6, 32:7, 32:14, 36:5, 38:10, 39:23, 42:6, 44:23, 51:17, 56:24, 68:10, 69:9, 71:3, 71:6. meaning 4:16, 5:17, 5:22, 5:23, 8:23, 16:6, 28:5, 32:24, 41:22, 64:21, 67:10, 67:23, 71:21, 74:23, 75:4. means 5:23, 21:13, 22:18, 37:8, 39:2, 39:15, 39:18, 40:18, 42:15, 44:19, 56:7, 67:16, 70:2, 71:4, 71:9, 74:19. meant 42:5, 49:10. Melissa 2:45, 3:13. memories 59:13. mention 41:1, 57:23. mentioned 37:16, 40:23. mentions 53:2. merely 33:24. merge 53:13. . </p>
---	---	--

Concordance

met 16:13 .	next 12:21, 20:10, 20:13, 64:8 .	original 41:3, 41:11, 66:21, 66:23, 67:19 .
mic 17:25, 23:17 .	No. 1:5, 3:3, 18:5, 27:15, 27:19, 28:9, 40:22, 59:24, 60:14, 60:15, 60:16, 71:8 .	otherwise 18:13, 42:21 .
Michael 2:11, 2:24, 3:9 .	note 4:12, 11:8, 13:6 .	output 6:14, 6:19, 6:21, 7:19, 9:13, 14:2, 46:23, 46:24, 48:9, 69:23 .
microwaves 24:8 .	notes 4:13, 4:19 .	outputs 44:8 .
middle 47:8 .	Nothing 15:2, 26:21, 28:4, 53:4, 57:18, 75:13, 75:16 .	outputting 11:14 .
Mike 3:14, 5:5 .	notice 37:21, 37:22, 64:14 .	outside 31:6 .
minor 38:7, 42:13, 42:15 .	number 44:15, 59:3, 73:5 .	outstanding 68:3 .
minutes 51:6 .	.	overall 30:17 .
misrepresentation 60:12 .	.	overcome 30:5 .
misunderstanding 59:22 .	< O > .	own 24:24, 70:23 .
modified 55:13 .	object 10:19 .	owner 11:7, 72:8 .
modulated 13:6, 13:10 .	obviously 16:18, 34:24, 72:14, 72:15 .	.
modules 24:18, 31:5, 59:2 .	occurring 32:11 .	.
moment 42:1, 65:2, 65:3, 65:12, 69:20, 69:22, 73:1, 73:2, 73:19, 73:22, 73:23 .	occurs 16:14 .	< P > .
moments 68:20 .	offered 74:18 .	page 75:3 .
morning 3:1, 3:6, 3:13, 3:14, 3:21, 4:23, 4:24, 5:5, 35:5, 57:11 .	Office 37:23, 38:18, 38:20, 39:14, 42:3, 42:11, 42:22, 42:23, 68:5, 72:1 .	paper 19:13 .
motivation 46:2 .	OFFICIAL 2:47, 4:14, 76:12 .	papers 5:1, 24:24, 24:25, 27:10, 34:14, 34:17, 34:19, 64:8, 75:7 .
move 44:1, 45:14 .	often 34:25 .	parameter 65:6, 66:9, 66:11, 66:13, 66:19, 66:25, 67:12, 67:14, 67:18, 68:8, 68:21, 69:4, 69:8, 69:9, 69:24, 70:11, 71:18, 71:20, 71:21, 72:7, 72:16, 72:20, 72:22, 74:4, 74:6, 74:11 .
MS 2:10, 2:17, 2:45, 3:6, 3:12, 3:13, 3:19, 10:8, 10:11, 10:12, 12:25, 17:24, 17:25, 18:2, 18:4, 19:14, 27:15, 28:7, 29:2, 29:14, 29:17, 33:6, 40:22, 41:24, 57:21, 61:2, 61:7 .	Okay 15:9, 29:18, 33:4, 43:11, 45:25, 61:7 .	parameters 24:18, 25:7 .
multiple 12:2, 22:2, 23:12, 51:1, 51:2 .	ones 41:2 .	parenthetical 4:19 .
multiplexer 48:6, 52:7, 52:16, 52:19 .	open 47:17, 60:24 .	part 4:13, 18:17, 18:24, 23:5, 26:13, 29:7, 29:15, 29:23, 29:24, 30:7, 31:12, 31:22, 33:10, 35:20, 68:25 .
myself 38:15 .	opened 60:1 .	particular 6:6, 11:25, 12:3, 12:13, 26:12, 27:24, 31:1, 41:14, 57:3, 58:19, 60:2, 60:16, 69:21, 69:22, 74:16 .
.	operate 7:10, 12:2, 12:5, 12:6, 12:7, 52:11, 52:22 .	particularly 7:3, 10:3, 30:9 .
.	operates 12:1, 13:21, 23:23, 32:4, 57:3, 57:4 .	parties 69:19 .
< N > .	operating 12:12, 12:14, 53:8 .	partition 22:1 .
named 48:2 .	operation"--and 45:16 .	parts 51:23, 57:6 .
narrow 71:3 .	operation--again 53:12 .	pass 10:8, 29:9, 39:20, 44:6, 49:5, 55:9, 58:9, 59:21, 60:5, 60:11, 60:17, 60:24 .
nature 22:9 .	operations 35:10, 35:17, 37:25, 38:6, 38:24, 39:2, 39:10, 39:16, 39:18, 41:1, 41:13, 41:15, 52:8, 54:19, 54:22, 54:24 .	passage 10:24, 24:11, 27:2, 33:23, 37:2, 68:24, 75:5 .
near 20:2 .	operations' 39:3, 39:19, 40:4 .	passed 60:5 .
necessarily 26:16, 69:11 .	operations--or 53:9 .	passes 60:4 .
necessity 68:23 .	operatively 50:18 .	
need 6:19, 6:21, 7:7, 9:13, 9:25, 19:4, 20:22, 24:13, 25:7, 34:10, 58:9, 59:16 .	opportunity 5:3 .	
needed 6:19, 58:9 .	option 10:22, 15:15 .	
needs 13:4, 21:4, 28:22, 29:15, 41:10 .	order 4:9, 4:15, 4:17, 61:21, 75:20 .	
new 38:8, 42:24, 43:5, 43:7, 43:8 .	ordinary 4:16, 5:16, 8:9, 8:23, 20:3, 32:17, 41:22, 64:21 .	

Concordance

passing 59:25 .	31:17, 33:9 .	preliminarily 5:2 .
patent--pre-regulated 16:7 .	PNC 24:24 .	preliminary 3:22, 3:23, 3:25, 4:5, 4:12, 8:7, 15:23, 20:25 .
patent--would 53:13 .	podium 39:20 .	premise 9:3, 10:6, 10:15, 11:3 .
patentee 37:23, 38:4, 38:9, 49:14, 50:3 .	point 3:20, 7:8, 7:11, 8:13, 9:15, 10:5, 15:10, 19:21, 21:6, 22:8, 22:16, 25:20, 29:20, 29:25, 30:21, 31:2, 31:5, 32:1, 35:1, 50:14, 53:21, 56:23, 61:14, 64:25, 65:24, 68:19, 72:13, 74:2, 74:5, 75:2 .	PRESCRIBED 76:5 .
patents 48:23, 62:18, 62:20 .	point--the 73:24 .	presentation 6:12 .
patents--excuse 46:8 .	pointed 18:7, 18:10, 20:2, 25:18, 41:9, 53:19, 71:1, 71:4 .	presenting 3:8 .
paths 46:3, 46:13, 46:15, 48:9, 48:11, 48:14, 48:20, 48:22, 49:11, 49:18, 49:20, 49:22, 49:24, 50:1, 50:2, 50:9, 51:2, 52:5, 55:19, 58:13, 60:7, 63:6, 63:12 .	pointing 74:5 .	presumption 30:5 .
PAYNE 1:24 .	points 5:7, 15:5, 61:13, 68:1, 68:12 .	previous 35:10, 36:9, 36:11, 36:17, 36:21, 37:25, 38:6, 38:23, 38:24, 39:2, 39:3, 39:10, 39:15, 39:18, 40:4, 40:13, 40:25, 41:13, 41:14 .
PC 2:19, 2:26 .	portion 18:12, 35:15, 35:19, 64:23 .	previously 47:16 .
PCB 18:25, 19:4, 19:9, 31:11, 31:16 .	portions 50:14, 51:20, 63:10 .	prime 58:1 .
per 58:1 .	position 22:16, 27:16, 33:15, 55:23, 61:9, 69:8, 69:10, 69:14, 70:1, 70:8, 70:13 .	printed 13:22, 28:10, 29:2, 29:3, 29:20, 29:21, 29:24, 30:19, 31:7, 32:6, 32:9, 33:8 .
perceived 48:2, 50:4 .	positions 3:24, 34:23 .	prior 37:12, 49:14, 49:15, 53:24, 55:11, 58:18, 59:12, 60:19, 70:8 .
performing 30:22, 30:23, 45:15 .	possibilities 19:6 .	probably 62:12 .
perhaps 5:2, 66:5 .	possibility 52:20, 61:14 .	problem 45:11, 46:4, 46:16, 47:25, 48:1, 50:4, 58:21 .
period--not 69:25 .	possible 55:24, 57:8 .	problems 53:23, 62:11 .
period. 72:11, 72:25 .	post-allowance 38:19 .	proceed 3:11, 3:18 .
periods 70:18, 70:20, 72:9 .	posture 54:12 .	PROCEEDINGS 76:3 .
permission 27:11 .	power 11:9, 13:24, 14:8, 14:16, 14:24, 14:25, 15:7, 15:20, 17:13, 17:18, 18:16, 18:19, 18:22, 18:23, 19:9, 19:11, 19:18, 24:7, 28:13, 28:17, 30:20, 31:8 .	process 73:13, 73:23 .
personality 23:19 .	powering 7:1 .	product 53:14 .
persuaded 72:5 .	pre-determined 35:24, 36:2, 36:11, 36:16, 36:20, 41:6 .	productive 4:10 .
Petitioner 72:6 .	Pre-regulated 13:1, 13:8, 13:9, 13:11, 13:14, 13:17, 14:1, 14:15, 15:4, 15:18, 15:19, 15:24, 16:12, 16:21, 17:1, 17:5, 17:13, 17:14, 18:8, 18:10, 19:3, 20:7 .	products 54:21 .
phase 65:7 .	pre-regulating 14:10, 14:11, 14:12 .	program 73:8 .
phrase 27:24, 51:9, 63:1, 63:9 .	pre-regulation 15:3, 16:4 .	programmed 73:6 .
physical 28:21, 60:10 .	preamble 27:19, 27:23, 28:24, 29:11, 30:3, 30:17, 31:20, 32:13, 32:24 .	promptly 75:20 .
physically 5:12, 20:25 .	preferred 11:13 .	prong 51:25 .
picture 52:14, 52:15 .		proper 49:5, 74:22 .
piece 13:21 .		proposal 13:6, 13:7 .
pieces 49:15 .		proposed 8:6, 35:9, 44:11, 62:11, 62:14, 65:23, 68:17 .
pink 45:16 .		prosecution 33:19, 33:23, 35:12, 36:6, 37:7, 37:16, 39:8, 40:15, 40:23, 41:20, 42:2, 42:21, 44:23, 49:15, 54:9, 55:9, 59:20, 60:12, 62:3, 62:4, 62:7, 62:20 .
pins 56:10, 69:23 .		prosecution--"disabling 49:18 .
pipes 25:5 .		provide 24:12, 24:13, 28:5, 28:17, 29:9 .
place 18:13, 43:1, 55:15 .		provided 24:2, 35:12 .
placed 24:5, 64:16 .		provides 27:17, 27:20, 27:23,
places 26:11, 51:12 .		
plain 4:16, 41:22, 64:21, 71:20, 74:23 .		
Plaintiff 1:7, 2:3, 3:7, 4:22, 25:23, 30:13, 31:20, 75:16 .		
Please 3:1, 4:25, 10:9, 27:15, 40:22, 57:16, 60:15 .		
pleasure 5:6 .		
plug 24:7, 24:8 .		
plurality 28:12, 29:6, 30:20,		

Concordance

28:3, 28:14, 28:19, 28:20, 28:21, 35:10, 36:7 .	13:11, 17:8, 17:19, 17:20, 18:7, 20:3, 29:19, 30:4, 30:5, 30:6, 30:9, 30:10, 32:19, 36:1, 41:17, 41:19, 45:1, 51:12, 60:2, 64:4, 67:15, 71:1 .	relate 14:4, 72:9 .
providing 29:4, 29:8 .	reason 11:19, 12:9, 15:5, 24:7, 24:9, 25:24, 33:7, 41:9, 46:1 .	related 17:9 .
public 10:5 .	reasons 10:19, 11:23 .	relates 35:19 .
pull 17:25 .	rebut 26:1 .	relevant 58:22, 65:1 .
purple 58:5 .	receive 36:14, 48:3, 54:16, 54:18, 54:19, 54:20, 60:23 .	rely 8:17 .
purported 40:2 .	received 4:6, 18:9, 18:12, 35:25, 41:6, 54:21, 60:21, 60:22 .	relying 55:5 .
purpose 3:22, 11:7, 58:16 .	receives 46:19 .	remark 41:25 .
put 20:25, 50:11, 52:14, 53:24, 56:23, 57:7, 62:5, 63:2, 72:4, 73:21 .	receiving 35:7, 35:16, 35:18, 35:20, 36:3, 39:6, 39:12, 41:3, 41:12, 48:4, 53:8 .	remarks 38:3, 57:12, 64:16 .
puts 17:19, 50:9 .	recess 57:11 .	removed 19:19 .
.	recess. 57:15 .	removes 16:5 .
.	recitation 50:21 .	repeated 49:23, 51:7, 54:8, 62:17, 62:19, 63:15 .
< Q > .	recites 23:12 .	repeats 51:3 .
question 9:2, 16:19, 22:12, 22:21, 23:21, 25:22, 36:1, 38:14, 39:4, 40:3, 43:3, 43:5, 44:22, 56:2, 56:3, 56:14, 60:13, 62:2, 62:16 .	recognized 59:10 .	rephrasing 70:8 .
question--the 56:24 .	RECORD 3:2, 3:5, 3:20, 4:2, 25:15, 58:1, 64:16, 69:17, 71:15, 72:5, 72:21, 75:3, 76:2 .	replace 52:16 .
questions 19:12, 20:9, 25:10, 39:21, 61:8, 62:9 .	red 14:7, 52:17 .	replaced 40:4 .
quibble 8:14 .	red--is 46:24 .	replacement 52:18, 53:1 .
quick 19:15, 41:25 .	redefine 67:21 .	reply 24:25, 52:6, 52:25 .
quickly 14:22 .	reduce 45:8, 46:3, 59:7 .	REPORTER 2:47, 76:12 .
quite 6:15, 15:12, 66:22 .	reduced 6:8 .	represent 64:11 .
quote 68:15, 68:24 .	reducing 47:25, 48:18, 48:20, 50:2, 61:4, 61:5 .	representatives 3:10, 3:17 .
quoting 6:25 .	reduction 58:17, 58:23, 59:14, 61:3 .	represented 75:7, 75:8 .
.	redundant 6:22 .	request 69:2 .
.	reference 30:2, 50:8, 52:6 .	require 9:16, 10:22, 11:1, 22:22, 54:15, 58:12, 72:9 .
< R > .	referenced 30:8, 32:21, 48:22 .	required 28:12, 30:18, 54:3, 54:16, 72:19 .
rail 24:1 .	references 43:19, 48:15, 51:4 .	requirement 7:23, 11:11, 11:12, 12:10, 15:10, 25:25, 32:8 .
rails 25:5 .	referred 27:2, 29:13, 44:7 .	requirements 6:17 .
Rajan 33:24 .	referring 31:21, 31:23, 69:18, 74:11 .	requires 9:7, 23:11, 23:24, 28:7, 44:6, 67:5 .
ran 12:4, 12:5 .	refers 71:18, 74:11 .	requiring 60:2 .
ranges 12:7 .	reflected 4:15 .	reserve 4:4 .
rank 51:1, 57:22, 59:5, 59:14, 69:21, 69:23 .	regarding 19:18, 25:19, 42:19, 43:14, 60:13, 72:1 .	resolve 69:5 .
ranks 47:12, 47:20, 50:24, 57:25, 58:1, 58:3, 58:6, 58:8, 58:13, 58:14, 58:19, 59:2, 59:4, 59:13, 61:17 .	Regardless 59:3 .	respect 20:5, 57:24, 58:20, 58:24, 60:13 .
ranks. 50:20 .	regards 43:15, 44:4, 61:14, 70:17 .	respective 72:22 .
rather 3:25, 72:10 .	regulated 13:3, 23:12, 23:15 .	respond 14:22, 61:11 .
reader 20:3 .		response 19:15, 25:13, 57:12 .
ready 3:11, 3:18 .		rest 12:19, 19:10, 19:13, 20:13, 20:14, 25:9, 27:1, 27:6, 27:9, 27:10, 28:1, 34:13, 34:16, 34:19, 41:23, 61:8, 64:7 .
REAL 2:28, 67:4 .		restrictions 18:13 .
real-world 26:17 .		result 21:15 .
really 5:21, 8:13, 8:25, 13:5,		results 64:4 .
		retain 7:14 .
		retained 41:3 .
		reversed 54:15 .

Concordance

<p>review 4:2, 54:13 . reviewed 54:14 . reviewing 13:3 . RICHARDSON 2:19, 2:26, 2:34 . right--i'll 52:13 . right--the 19:3 . RMR 1:43, 2:47, 76:11 . road 33:14, 44:8, 44:10, 44:24, 51:14, 51:22, 51:24, 52:1, 53:21, 55:1, 55:15, 58:10, 59:17, 59:18, 61:17, 61:21, 61:22, 62:22, 63:3, 63:20 . route 48:9 . row 69:21 . row. 69:23 . ROY 1:24 . rules 32:17, 38:18 . ruling 30:1 . . . < S > . S/shawn 76:9 . Samsung 1:11, 3:3, 3:14, 3:17, 5:3, 5:5, 18:9, 24:24, 25:18, 33:12, 34:13, 34:19, 34:23, 35:6, 35:9, 41:15, 41:17, 68:6, 70:1, 75:4, 75:13 . SAN 2:27, 2:29 . save 16:10 . saw 51:5, 52:24, 63:5, 63:14, 70:13 . saying 21:2, 25:24, 28:24, 29:10, 32:8, 38:9, 50:21, 55:5, 59:23, 59:25, 64:21, 67:8 . says 15:2, 15:7, 15:8, 15:11, 18:16, 18:22, 27:19, 27:22, 36:12, 41:22, 45:7, 48:7, 49:16, 51:16, 52:21, 53:17, 59:7, 61:19, 65:12, 67:6, 73:19, 73:21 . scheme 57:4 . scope 15:23, 32:16, 38:17, 38:20, 38:21, 39:25, 42:24, 43:9 . screen 9:3, 59:15, 75:6 . seated 3:1, 57:16 . second 6:8, 13:20, 19:9, 20:20, 21:8, 22:10, 35:23, 44:22, 45:14, 46:23, 58:6, 58:11, 59:16, 59:18, 60:17, 67:2,</p>	<p>68:18, 72:24, 73:1 . seconds 24:2, 24:13 . section 15:6, 44:21, 50:12, 65:1, 72:23 . seeing 57:9 . seeking 39:1, 39:5, 40:8, 66:2 . seem 33:12 . seemed 67:21 . seems 40:8, 67:17, 71:1, 71:6, 74:3 . seen 44:20, 45:8, 51:19, 59:7, 62:13 . sees 58:25, 59:2, 59:13 . select 44:13, 48:8 . selected 49:6, 60:21, 69:21, 69:23 . selecting 46:13, 48:16, 50:1, 59:21, 60:6 . selection 46:14, 46:15, 46:16, 46:25, 48:10, 48:13, 55:10 . selectively 48:13, 48:22, 48:25, 54:6, 54:8 . selects 46:11, 48:8 . send 6:20, 46:12 . sense 7:16, 8:20, 25:24, 58:12 . sent 60:21 . sentence 50:23, 50:24 . separate 6:9, 7:11, 7:12, 7:14, 9:10, 10:16, 10:20, 11:15, 18:11, 18:19, 21:1, 21:4, 23:21, 25:1, 26:4, 27:3, 27:4, 31:5 . seq 64:24 . serial 62:20, 64:5 . serve 13:17, 60:25 . set 3:21, 16:22, 54:25, 69:5, 69:8 . sets 47:9, 47:11 . SHAWN 1:43, 2:47, 76:11 . shawn_mcroberts@txed.uscou rts.gov 1:47 . shift 14:14 . short 24:9 . shouldn't 15:9 . show 59:15 . showed 51:5, 63:23 . showing 47:6 . shown 18:24 . shows 5:11, 26:4, 46:7, 51:13, 52:12 .</p>	<p>side 3:24, 14:21, 22:1, 44:21, 44:22, 48:3, 49:12, 63:17, 63:18, 63:20, 72:24, 72:25, 73:1 . sided 68:6 . sides 3:21 . signal 36:10, 36:13, 36:14, 36:15, 46:20, 49:12, 55:22, 56:3, 56:15 . signal. 46:19 . signals 15:14, 26:21, 28:13, 28:18, 28:22, 29:4, 29:9, 30:21, 31:9, 35:8, 35:16, 35:21, 35:25, 36:3, 39:6, 39:12, 41:4, 41:6, 48:15 . significant 65:6 . similar 22:4, 37:20, 48:3, 62:18 . simple 62:22 . simply 41:8 . single 7:4, 10:23, 21:25, 36:22, 49:1, 51:8, 51:16, 53:10, 53:11, 58:3, 58:9, 59:5, 59:11, 59:14, 59:16, 60:8, 62:1, 62:14, 64:2 . sir 57:20 . sit 35:1 . sitting 32:6, 32:9 . situation 30:2, 30:11, 32:18, 32:20 . situations 26:18 . skill 8:9, 20:4 . sky 17:3, 17:15 . Slide 5:11, 6:11, 11:24, 14:23, 18:5, 23:2, 24:20, 24:23, 27:15, 28:9, 40:22, 55:13, 59:24, 60:15, 70:14 . slides 10:8, 12:25, 37:9, 51:7 . slot 28:11 . Smith 2:13, 2:41, 2:45, 3:13, 3:19, 10:8, 10:11, 10:12 . Sohi 3:10 . Sol 30:1 . solution 48:1, 50:3, 50:4 . solve 47:25 . solved 46:4 . somehow 52:11, 53:19 . Sometimes 44:7, 52:10 . Sorry 58:21 . sorry--data 53:9 . sort 9:9, 13:21, 21:17, 68:18 .</p>
--	--	--

Concordance

sought 66:12 .	74:12, 74:17, 74:20 .	terminal 47:18 .
sounds 7:20 .	structural 17:11 .	terminals 48:5, 55:20 .
source 8:13, 13:15, 14:24, 14:25, 15:7, 17:16, 17:18 .	structure 17:9, 17:19, 28:22 .	terms 3:22, 3:25, 4:18, 18:13, 20:17, 21:5, 26:20, 32:14, 37:15, 38:10, 38:12, 38:25, 40:15, 42:3, 44:2, 44:5, 44:23, 75:12 .
sources 15:20 .	struggling 22:22, 26:4 .	test 27:17 .
SOUTH 2:42 .	stuck 10:4 .	TEXAS 1:2, 1:12, 1:45, 2:15, 2:37, 2:43, 2:49 .
spatial 60:10 .	subject 37:19 .	text 27:24, 32:21, 46:10 .
speaking 24:11 .	subsequent 36:25, 65:15 .	Tezyan 2:11, 3:9, 64:10 .
spec 63:14 .	sudden 32:7 .	that--"is 69:19 .
specialized 11:6 .	sufficient 58:3, 59:16, 71:25 .	that--but 43:15 .
specific 26:20, 40:9, 42:18, 60:3, 60:9, 67:8, 67:23, 74:6, 74:20 .	sufficiently 72:5, 72:8 .	that--makes 68:25 .
specifically 15:16, 29:23, 38:7, 51:4, 52:3, 55:1 .	suggest 59:18 .	that--where 37:18 .
specification--switching 49:24 .	SUITE 2:6, 2:14, 2:21, 2:36 .	the--excuse 54:17 .
spirit 4:7 .	superfluous 6:22, 7:7, 9:11, 9:12 .	themselves 52:2 .
split 52:8, 54:23, 55:16 .	supplied 10:23, 11:2 .	they've 15:22, 51:19, 51:22 .
splitting 63:6 .	supply 10:25, 11:4 .	thinking 8:9 .
ST. 2:14 .	support 16:15 .	third 7:9, 9:4, 20:20, 22:10 .
stand 5:1, 12:23 .	supports 20:8 .	though 4:16, 24:16, 30:8, 31:2, 54:3, 57:24 .
standard 11:12 .	supposed 28:17 .	three 20:13, 24:18 .
STARS 2:5 .	SW 2:21 .	throughout 12:12, 27:18, 71:10 .
start 12:8, 18:5, 18:6, 23:10, 36:8, 65:5, 66:3, 66:10, 66:12, 67:14, 69:5, 69:9, 69:12, 70:9, 71:5, 72:10, 73:11, 73:16 .	swapped 40:5 .	thrust 35:18, 35:23 .
started 29:19 .	switch 17:24, 44:9 .	tied 14:16, 14:18, 15:21, 16:8, 17:9 .
starting 5:21, 59:6 .	switched 60:8 .	time--but 67:1 .
starts 37:3, 40:6, 58:23, 63:3, 65:2, 65:13, 68:8, 68:22, 69:1, 69:25, 70:2, 71:22, 72:7 .	switches 48:25, 49:1, 49:19, 60:1 .	time--right 66:20 .
state 3:5, 47:2 .	switching 44:6, 46:2, 48:18, 48:19, 48:20, 48:22, 49:3, 49:9, 49:22, 50:1, 50:9, 52:5, 59:21, 60:6, 60:7, 60:11, 62:5, 63:3, 63:7 .	time--which 66:23 .
statement 28:4, 42:7, 42:22, 42:23, 66:1 .	systems 15:25, 25:19, 31:10 .	Tobin 3:10 .
statements 65:25 .	.	today 3:7, 3:9, 75:17 .
STATES 1:1, 1:25, 23:23, 76:7 .	.	today--young-jun 3:17 .
stay 12:12 .	< T > .	together 7:13, 13:21, 14:19, 17:19, 53:14, 70:20 .
STE 2:28 .	talked 12:3, 13:18, 14:13 .	took 42:14, 57:6, 73:14 .
step 16:2, 41:10, 41:12 .	talks 12:13, 24:1, 27:3, 37:11, 47:13, 49:4, 63:17, 63:22, 66:19, 71:17 .	tools 11:9 .
steps 36:8 .	taller 23:16 .	top 31:4, 46:20, 46:21, 55:16 .
stock 51:12, 53:24 .	targeted 49:6 .	top--"to 45:8 .
stops 65:3, 65:13 .	teaches 49:21 .	tough 43:21 .
straight 33:22, 51:9, 51:18, 51:21, 52:12, 52:22, 53:11, 53:20, 58:10, 61:21 .	technically 69:10 .	TRANSCRIPT 76:2, 76:4 .
strange 51:18, 54:12 .	technique 60:20 .	transmission 36:25, 45:4, 47:3, 47:7, 48:16, 48:25, 50:16, 59:9 .
STREET 1:44, 2:36, 2:48 .	technology 7:17, 21:23, 22:11, 62:18 .	triggers 24:4 .
strip 24:8 .	technology--you 21:19 .	tristate 46:21, 46:23, 47:4, 47:15, 52:8, 52:10, 52:17, 52:21, 53:1, 53:7, 56:25, 57:2, 63:22, 63:24, 73:9, 73:15 .
strobe 36:10, 36:16, 69:17, 74:7,	tells 20:3 .	
	temporal 60:9 .	
	tentative 66:14 .	
	term-by-term 4:8 .	

Concordance

true 42:22, 43:1, 43:8.
Truelove 2:17, 3:6, 3:7, 3:12.
try 34:7, 44:18, 52:14, 75:19.
trying 41:17, 47:25, 67:21, 68:16.
tuned 66:18, 67:3.
turn 4:21, 14:1, 14:13, 20:10.
turned 47:16, 60:3, 60:5, 60:18, 60:19.
turning 60:10.
turns 46:20.
two-rank 58:21, 58:24, 59:12, 59:15, 61:15.
type 74:6, 74:16.
types 6:15, 11:8.
 .
 .
< U > .
ultimately 21:22, 22:11, 23:4, 63:7.
unclaimed 31:23.
unclear 40:7.
uncommonly 4:5.
undergone 64:5.
understand 16:14, 22:20, 23:7, 25:23, 26:23, 33:15, 34:1, 34:2, 34:9, 61:9, 64:4, 68:17, 70:7.
understanding 16:16, 60:18, 66:1, 66:6, 66:14, 66:16, 71:20, 73:3.
Understood 5:17, 5:22, 33:1, 33:21, 59:20, 67:20.
unfortunately 62:16.
uniform 49:8, 52:4.
uniquely 8:11.
UNITED 1:1, 1:25, 76:7.
unless 20:9, 25:9, 39:21, 62:8.
unlimiting 27:25.
unnecessary 6:22.
until 73:16, 73:23.
useful 26:1, 60:22.
uses 70:18.
using 25:17, 45:4, 61:16, 69:5, 69:7, 69:8.
 .
 .
< V > .
value 7:4, 7:5, 7:18, 7:22, 9:15, 9:20, 9:21, 9:23, 10:16, 21:4,

46:22, 52:9, 52:10.
values 6:13, 7:12, 7:14, 7:24, 9:10, 9:12, 9:16, 9:24, 21:5, 26:21.
variable 71:7.
variety 4:12.
various 7:1, 26:10, 29:21, 71:10.
version 55:13, 55:14.
versus 3:3, 38:24, 63:8.
view 8:6, 32:25.
Voila 51:21.
voltages 5:25, 6:1, 6:10, 12:2, 12:10, 12:14, 13:17, 17:1, 17:2, 17:4, 17:5, 17:9, 17:12, 17:14, 22:5, 22:10, 23:12, 23:13, 23:15, 23:24, 24:16, 25:1, 25:6, 25:25, 26:2, 26:5.
volts 6:19, 9:22, 10:22, 11:2, 11:14, 12:8, 24:2, 24:8, 24:12, 27:4.
vs 1:9.
 .
 .
< W > .
wading 64:21.
walk 13:20, 46:6.
wanted 4:19, 9:14, 22:15, 66:25.
wants 22:1, 34:23, 40:17.
WASHINGTON 2:20, 2:22, 2:42.
well-established 27:22.
Whatever 3:24, 4:9, 35:1, 41:8.
whereas 6:7.
Whereby 46:10.
wherein 65:5, 66:10.
wherever 42:12.
whether 13:3, 22:3, 22:9, 23:1, 23:2, 29:12, 29:14, 32:24, 41:14, 44:5, 50:6, 50:7, 60:16, 67:8, 68:10, 72:8.
whole 6:7, 63:1, 69:5, 73:24.
wide 72:23.
wire 24:1.
wireless 30:3.
wires 11:3.
with--just 26:4.
within 7:5, 8:7, 30:8, 30:16.
Without 28:24, 33:11, 55:22, 56:4, 56:16, 59:17, 61:22.
Won-jin 3:18.

word 8:15, 13:8, 20:7, 51:16, 55:1, 62:12, 62:23, 64:2, 72:14.
words 54:19, 55:22, 62:13.
work 42:10, 53:7, 53:23.
write 36:9, 36:10, 36:23, 37:12, 44:18, 58:25, 59:8, 60:4, 60:20, 60:23, 72:23, 73:13.
written 16:13, 68:11.
wrote 68:14.
 .
 .
< Y > .
Y1 47:5, 48:4, 52:9, 53:10, 55:20.
Y2 47:18, 48:5, 53:10, 55:20.
Y2. 52:10.
yellow 45:4.
yesterday 24:6, 64:12.
you--that 62:1.
 .
 .
< Z > .
Zheng 3:10.
ZHONG 2:10, 3:8, 17:24, 17:25, 18:2, 18:4, 19:14, 24:6, 27:15, 28:7, 29:2, 29:14, 29:17, 33:6, 40:22, 41:24, 57:21, 61:2, 61:7.